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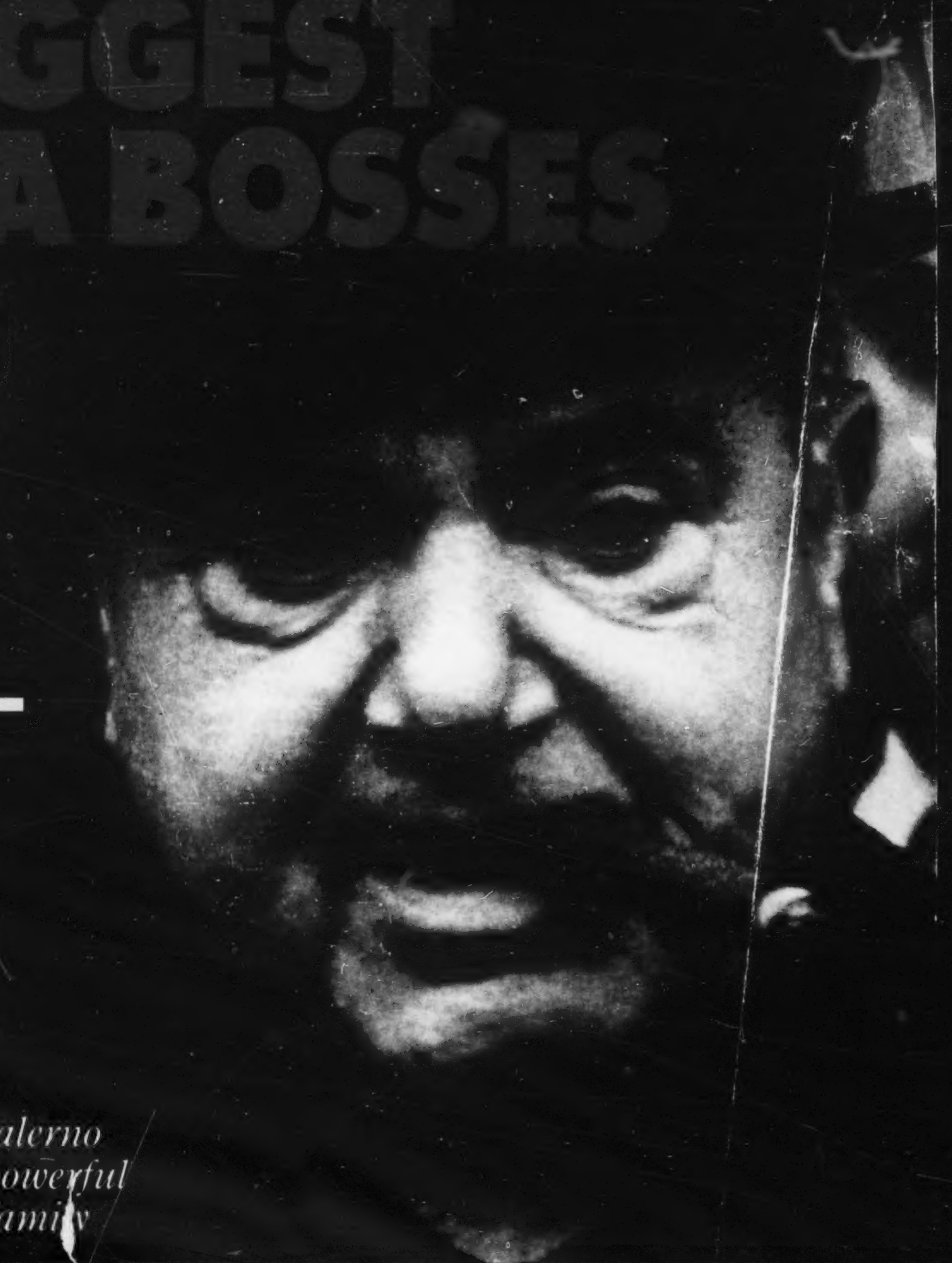
FORTUNE

NOVEMBER 10, 1986 $3.50

THE 50 BIGGEST MAFIA BOSSES

THE CRIME BUSINESS

Who runs it, how they manage it, who profits – and loses



No.1 Boss Anthony Salerno heads the powerful Genovese family

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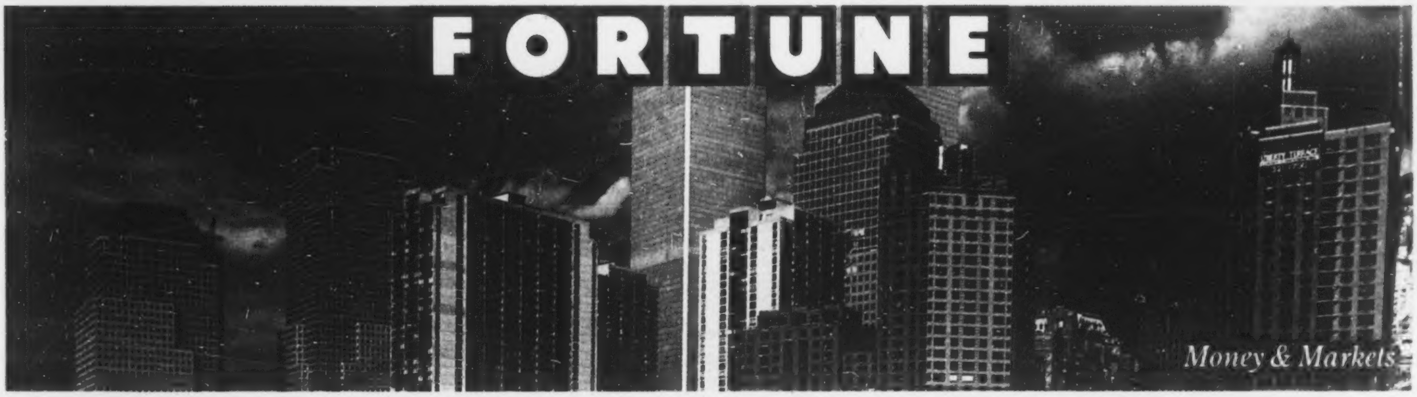
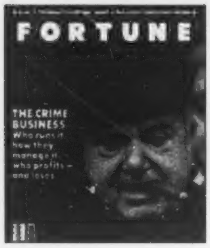
NOVEMBER 10, 1986 VOL. 114, NO. 11





Robert Maass of Photoreporters captured Anthony "Fat Tony" Salerno on film as he left federal court in Manhattan, having just been arraigned on racketeering charges. For how he and his colleagues run their businesses, see page 24.

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THE 50 BIGGEST MAFIA BOSSES

Meet the men who manage a $50-billion-a-year business that reaches into almost every U.S. city. They face familiar problems: aging leadership, less dedicated younger employees, increased foreign competition. And now the feds are trying to wreck their profit centers. ■ *by Roy Rowan*

CRIME PAYS. Annual gross income from the rackets will probably exceed $50 billion this year. That makes the mob's business greater than all U.S. iron, steel, copper, and aluminum manufacturing combined, or about 1.1% of GNP. These figures, compiled for the President's Commission on Organized Crime, include only revenues from traditional mob businesses, such as narcotics, loan-sharking, illegal gambling, and prostitution. They do not include billions more brought in from the mob's diversification into such legitimate enterprises as entertainment, construction, trucking, and food and liquor wholesaling.

The industry that runs this huge part of the economy comprises crime families, not companies. Wharton Econometric Forecasting Asssociates, in a study prepared for the President's Crime Commission, found that the mob's hold on the economy stifles competition and siphons off capital, resulting in a loss of some 400,000 jobs, an increase in consumer prices of 0.3%, a reduction in total output of $18 billion, and a decrease in per capita disposable income of $77 a year. Since organized-crime members cheat on taxes, the rest of the population will pay an estimated $6.5 billion more to the Internal Revenue Service this year.

The organization chart of a crime family or syndicate mirrors the management structure of a corporation. At the top of the pyramid is a boss, or chief executive. Below him are an underboss (chief operating officer) and a *consigliere* (general counsel). Then follow ranks of capos (vice presidents) and soldiers (lower-level employees who carry out the bosses' orders). Like corporations, crime groups often rely on outside consultants (see box, page 34).

For this story FORTUNE interviewed FBI agents, leaders of federal organized-crime strike forces, and local law enforcement officials across the U.S. On their assessment of the wealth, power, and influence of the crime bosses, FORTUNE has ranked them from 1 to 50 on the facing page.

In spite of its clout, organized crime is an industry in crisis. The leadership is old, and the next generation of managers seems to lack spirit, dedication, and discipline. "Today you got guys in here who never broke an egg," a New Jersey Mafia leader complained in a conversation bugged by the FBI. Another reported that a disrespectful underling

ROBERT MAASS—PHOTOREPORTERS

NO. 1 ANTHONY SALERNO *leaves Manhattan's federal court after arraignment. His driver, Vincent Cafaro, is on the left.*

HOW THEY RANK IN WEALTH, POWER, AND INFLUENCE

RANK	NAME *Nickname*	AGE	HEAD-QUARTERS	STATUS	FAMILY	SOURCES OF INCOME
1	**ANTHONY SALERNO** *Fat Tony*	75	New York City	IN JAIL, ON TRIAL	Genovese	Construction, unions, gambling, loan-sharking
2	**ANTHONY ACCARDO** *Joe Batters*	80	Palm Springs	FREE	Chicago	Gambling, unions, loan-sharking
3	**ANTHONY CORALLO** *Tony Ducks*	73	Long Island	ON TRIAL	Lucchese	Garbage, extortion
4	**GERARDO CATENA** *Jerry*	84	Boca Raton	FREE	Genovese	Construction, gambling, casinos
5	**GENNARO LANGELLA** *Jerry Lang*	47	Brooklyn	IN JAIL, ON TRIAL	Colombo	Construction, loan-sharking, gambling
6	**CARMINE PERSICO** *Junior*	53	Brooklyn	IN JAIL, ON TRIAL	Colombo	Construction, loan-sharking, gambling
7	**CHRISTOPHER FURNARI** *Christie Tick*	62	New York City	ON TRIAL	Lucchese	Construction, unions, gambling, loan-sharking
8	**SALVATORE SANTORO** *Tom Mix*	70	New York City	ON TRIAL	Lucchese	Construction, unions, loan-sharking
9	**PHILIP RASTELLI** *Rusty*	68	New York City	ON TRIAL	Bonanno	Concrete, unions, loan-sharking, narcotics
10	**VINCENT DINAPOLI** *Vinnie*	49	New York City	INDICTED	Genovese	Construction, unions
11	**RALPH SCOPO**	57	Brooklyn	ON TRIAL	Colombo	Construction, unions
12	**RUSSELL BUFALINO**	83	Scranton, Pa.	IN JAIL	Bufalino	Sweetheart contracts
13	**JOHN GOTTI**	46	New York City	IN JAIL, ON TRIAL	Gambino	Loan-sharking, robbery, phonograph records
14	**JOSEPH BONANNO** *Joe Bananas*	82	Tucson	IN JAIL	Bonanno	Narcotics
15	**SANTO TRAFFICANTE** *Louis Santos*	71	Tampa	FREE	Tampa	Gambling, loan-sharking, narcotics
16	**CARLOS MARCELLO** *Little Man*	76	New Orleans	IN JAIL	New Orleans	Gambling, real estate, nightclubs
17	**FRANK BALISTRIERI** *Frankie Bal*	68	Milwaukee	IN JAIL	Milwaukee	Gambling, liquor, Teamsters pension fund
18	**MICHAEL FRANZESE**	35	Long Island	IN JAIL	Colombo	Movies, auto dealerships, bootleg gasoline
19	**VINCENT GIGANTE** *Chin*	57	New Jersey	FREE	Genovese	Unions, gambling, loan-sharking
20	**JOSEPH FERRIOLA** *Joe Nagall*	59	Chicago	FREE	Chicago	Gambling, extortion
21	**JOSEPH AIUPPA** *Joey O'Brien*	78	Chicago	IN JAIL	Chicago	Gambling, casinos, unions
22	**GUS ALEX** *Slim*	70	Chicago	FREE	Chicago	Gambling, political fixing
23	**VINCENT ALO** *Jimmy Blue Eyes*	82	Miami	FREE	Genovese	Gambling, casinos, money laundering
24	**ANTHONY INDELICATO** *Bruno*	39	New York City	ON TRIAL	Bonanno	Narcotics
25	**MICHAEL GENOVESE** *Mike*	65	Pittsburgh	FREE	Pittsburgh	Gambling
26	**JOSEPH N. GALLO**	74	New York City	FREE	Gambino	Pornography, real estate
27	**PHILIP LOMBARDO** *Benny Squint*	78	Miami	FREE	Genovese	Construction, gambling, loan-sharking
28	**RAYMOND MARTORANO** *Long John*	59	Philadelphia	IN JAIL	Philadelphia	Narcotics, unions, vending machines
29	**ANTHONY PROVENZANO** *Tony Pro*	69	New Jersey	IN JAIL	Genovese	Unions
30	**JOHN CERONE** *Jackie*	72	Chicago	IN JAIL	Chicago	Casinos
31	**JAMES NAPOLI** *Jimmy Napp*	75	New York City	FREE	Genovese	Gambling, loan-sharking
32	**PAUL VARIO SR.**	72	New York City	IN JAIL	Lucchese	Gambling, robbery
33	**CARL DELUNA** *Toughy*	59	Kansas City, Mo.	IN JAIL	Kansas City	Gambling, casinos
34	**GENNARO ANGIULO** *Jerry*	67	Boston	IN JAIL	Boston	Numbers, loan-sharking, money laundering
35	**MATTHEW IANNIELLO** *Matty the Horse*	66	New York City	INDICTED	Genovese	Unions, topless bars, loan-sharking
36	**JAMES FAILLA** *Jimmy Brown*	67	New York City	FREE	Gambino	Unions
37	**JOHN RIGGI SR.**	61	New Jersey	FREE	DeCavalcante	Construction, waterfront unions
38	**LOUIS MANNA** *Bobby*	57	New Jersey	FREE	Genovese	Construction, gambling, loan-sharking
39	**JOHN DIGILIO** *Johnnie Dee*	53	New Jersey	FREE	Genovese	Waterfront unions, gambling, loan-sharking
40	**WILLIAM CAMMISANO** *Willie*	71	Kansas City, Mo.	FREE	Kansas City	Gambling, loan-sharking, fencing
41	**VINCENT MELI** *Little Vince*	62	Detroit	FREE	Detroit	Steel hauling
42	**VINCENT SOLANO** *Vince*	67	Chicago	FREE	Chicago	Gambling, unions
43	**NICODEMO SCARFO** *Nicky*	57	Atlantic City	FREE	Philadelphia	Gambling, numbers, unions
44	**TINO FIUMARA** *George Grecco*	46	New Jersey	IN JAIL	Genovese	Waterfront unions
45	**DONALD ANGELINI** *Don Angel*	60	Chicago	FREE	Chicago	Gambling
46	**PETER MILANO** *Pete*	60	Los Angeles	FREE	Los Angeles	Gambling
47	**PAUL SCHIRO** *Paulie*	45	Phoenix	FREE	Chicago	Gambling
48	**CHRIS PETTI**	47	San Diego	FREE	Chicago	Gambling
49	**ANGELO TUMINARO** *Little Angie*	81	Unknown	FUGITIVE	Lucchese	Narcotics
50	**FRANK BUCCIERI** *The Horse*	62	Palm Springs	FREE	Chicago	Loan-sharking

Based on information from FBI agents, federal prosecutors, and local law enforcement officials, FORTUNE *compiled this list of top Mafia leaders, their territories, and their lines of business. Although 17 of the mobsters are in jail, they retain their power, issuing orders by phone and through visitors.*

FACES FROM THE UNDERWORLD

CYNTHIA JOHNSON—TIME

NO. 2 ANTHONY ACCARDO *testifies before a Senate committee in 1983. Of Al Capone he says, "Met him at the race track."*

ANGEL FRANCO—WOODFIN CAMP

NO. 3 ANTHONY CORALLO, *now on trial, is the boss of the Lucchese clan. His lieutenants boast: "We rule JFK Airport."*

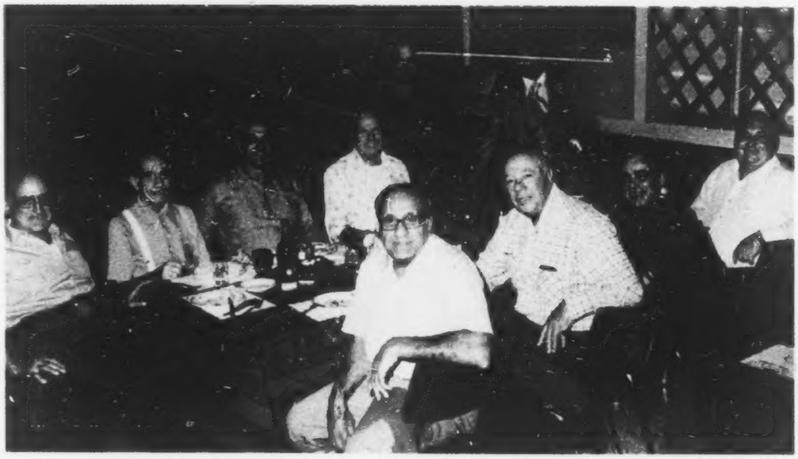
YVONNE HEMSEY—GAMMA LIAISON

NO. 6 CARMINE PERSICO, *the Colombo boss, calls organized crime a "government invented" expression.*

had addressed him by his nickname. The FBI says that the Mafia membership is shrinking. To bolster the lower ranks, the bosses have been recruiting tough young trainees from Sicily, called "Greenies."

The Mafia, the largest and best-established crime organization, is up against forceful new competition from Asian and Latin American underworld groups that specialize in heroin, cocaine, and marijuana (see box, page 38). These drug smugglers and dealers not only have destroyed the monopoly that the mob once had but also have put some Mafia veterans in the uncomfortably subservient role of acting as their distributors.

The most serious challenge comes from federal law enforcement officials, who are now effectively using the 16-year-old Racketeer Influenced and Corrupt Organizations (RICO) statute to prosecute mobsters. G. Robert Blakey, the Notre Dame law professor who drafted the 1970 law, says that it usually takes prosecutors some time to recognize the force of new legislation.


MICHAEL L. ABRAMSON—CHICAGO CRIME COMMISSION

A Chicago sitdown, *a rarely photographed mob conclave, took place in an unidentified restaurant, probably in 1978. Among those gathered are members of the Chicago Outfit including: Tony Accardo (front, center of the picture); Jackie Cerone, No. 30 (standing in suit); and Joe Aiuppa, No. 21 (extreme left), a former Chicago boss who is now in jail. IRS agents found the picture in the house of gambling boss Joe DiVarco (second from right).*

Recent indictments under the RICO statutes have brought about half the 50 most important crime members to trial, including No. 1, Tony Salerno, godfather of the Genoveses, the strongest Mafia family. Salerno is a defendant in the so-called Commission trial in New York. The government is trying to convict him and six other members of the Mafia's national ruling council, the Commission, of being part of a racketeering enterprise. Most of the accused sit stone-faced and silent in the courtroom. But Carmine Persico (No. 6), the basset-eyed boss of the Colombo family, is acting as his own lawyer.

Pressure from law enforcement agencies is forcing the mob to change some of its management techniques. Members of the Commission used to gather in large ceremonial "sitdowns" to settle their business problems. The FBI's extensive use of wiretaps and electronic bugs have made sitdowns prime surveillance targets, and these meetings have become less frequent affairs. The Mafia leaders are even reducing business lunches and dinners in their old public hangouts. Wherever possible, bosses use couriers to pass along their orders.

Mafia chieftains are also trying to snuff out disputes, which can flare in public and attract further FBI attention. But their voracious appetite for money usually defeats such nonadversarial policies.

The Mafia has always been able to surmount its other problems, overpower its adversaries, and outrun the feds. Even if the Commission members are jailed, their operations will con-

ANGEL FRANCO—WOODFIN CAMP

NO. 8 SALVATORE SANTORO, *a Lucchese underboss (left), with his lawyer Samuel H. Dawson, faces extortion charges.*

YVONNE HEMSEY—TIME

NO. 11 RALPH SCOPO, *a Colombo soldier and union boss, is accused of conspiring to shake down construction companies.*

PAUL ADAO—[illegible]

NO. 13 JOHN GOTTI, *dapper as usual at his racketeering trial in Brooklyn, is the self-proclaimed leader of the Gambino family.*

tinue. Bosses behind bars are not powerless. Their "access to telephones is virtually unlimited," assistant FBI director Oliver Revell told a Senate committee in 1983. The late Nick Civella, he pointed out, "was running the Kansas City mob from federal prison." If the Commission members' prison terms are long or if they die in jail, new leaders will rise in each family to take their place. Their replacements, whose names appear below them on the top 50 list, may turn out tougher still.

The culture of organized crime—based on greed, tenacity, and discipline—remains strong. Mob members call each other "wise guys," and so-called wise-guy rules define a strict code of conduct. For one thing, a member who vouches for someone who ultimately betrays the organization takes the hit—usually before reprisals against the stool pigeon. For another, if a fixer takes a mob payoff, he must produce precisely what he promises. No excuses or refunds are accepted.

The crime industry is organized geographically. Though the mob's grasp reaches most major cities—Seattle is an exception—two-thirds of the Mafia's membership is concentrated in New York and Chicago. The Commission adjudicates territorial disputes, settles business conflicts, and even passes on execution sentences.

Five sometimes-warring Mafia families control New York City—the Genoveses, Gambinos, Luccheses, Bonannos, and Colombos. Induction into these families involves a swearing-in ritual that calls for the taking of a secret oath and the giving of a drop of blood. In Chicago a single Mafia organization called the Outfit runs matters with less friction. There the initiation rite is consummated like a business deal, with a handshake. The Outfit also influences mob activities in Milwaukee, Kansas City, Phoenix, Las Vegas, and Los Angeles.

According to the FBI there are only about 1,700 sworn, or "made," Mafia members. For each member, the government figures there are ten "associates." Wharton Econometric Forecasting Associates estimates that the average annual income for an individual organized-crime member was about $222,000 between 1979 and 1981. Of course, the haul for the top 50 crime bosses would be much higher. The forecasters used data from the FBI as well as income statistics from the IRS—gross income from tax returns and average unreported income from criminal and civil cases. Wharton also estimated that associates made an annual average of $61,000 over that period. Associates advance to full membership in the organization by loyally carrying out orders and by being willing to kill. According to the Wharton study, some 265,000 people are employed in businesses run, at least in part, by organized crime.

JIM CUMMINS—NEWSDAY

NO. 18 MICHAEL FRANZESE, *the jailed Colombo capo, is a second-generation mobster. His father is a convicted bank robber.*

Underworld leaders often reinvest their swag, kickback money, or bribes in legitimate enterprises. Such diversification is less risky than expanding an illegal operation. Furthermore, benign business can camouflage much criminal activity and reduce the danger of prosecution for income tax evasion.

In doing business with law-abiding companies, mob leaders have learned to cash in on their notorious reputation without automatically resorting to violence. Fraud and intimidation are their favorite tactics. Says Steven J. Twist, chief assistant attorney general of Arizona: "The dangerous thing about organized crime today is it has become semilegitimate."

continued

REPORTER ASSOCIATE *Andrew Kupfer*

A common racketeer strategy is to control a union so that it willingly signs cut-rate "sweetheart" contracts with mob-run companies and threatens to strike competitors. Underworld leaders have used unions to influence and infiltrate many legitimate businesses, from warehouses to nightclubs. Wharton forecasters figure that the involvement of organized crime tends to push prices up between 0.5% and 2% in these and related industries, such as food and liquor distribution.

A corrupt union is a profit center. It offers almost unlimited opportunities for extortion through the use of "ghosts" (fictitious workers) and "no-shows" (employees who do not come to work) and the threat of slowdowns. Mob-controlled unions and labor-leasing companies supply security guards for nuclear power plants, garbage collectors for most New York City office buildings, and truck drivers for Shell Oil, Coca-Cola, and International Paper, among many others. "A union can be used instead of a gun or a baseball bat," says Edward McDonald, chief of the Organized Crime Strike Force in Brooklyn.

ANTHONY SALERNO, 75, whose name appears first among the top 50, heads an underworld conglomerate with enterprises on both sides of what for him, at least, is an indistinct line separating illegal from legitimate business. Known as "Fat Tony" ("Too fat to flee," chide his underworld cronies), he presently resides at the Metropolitan Correctional Center in Manhattan, next door to the U.S. Southern District Court, where he and other alleged Commission members are on trial.

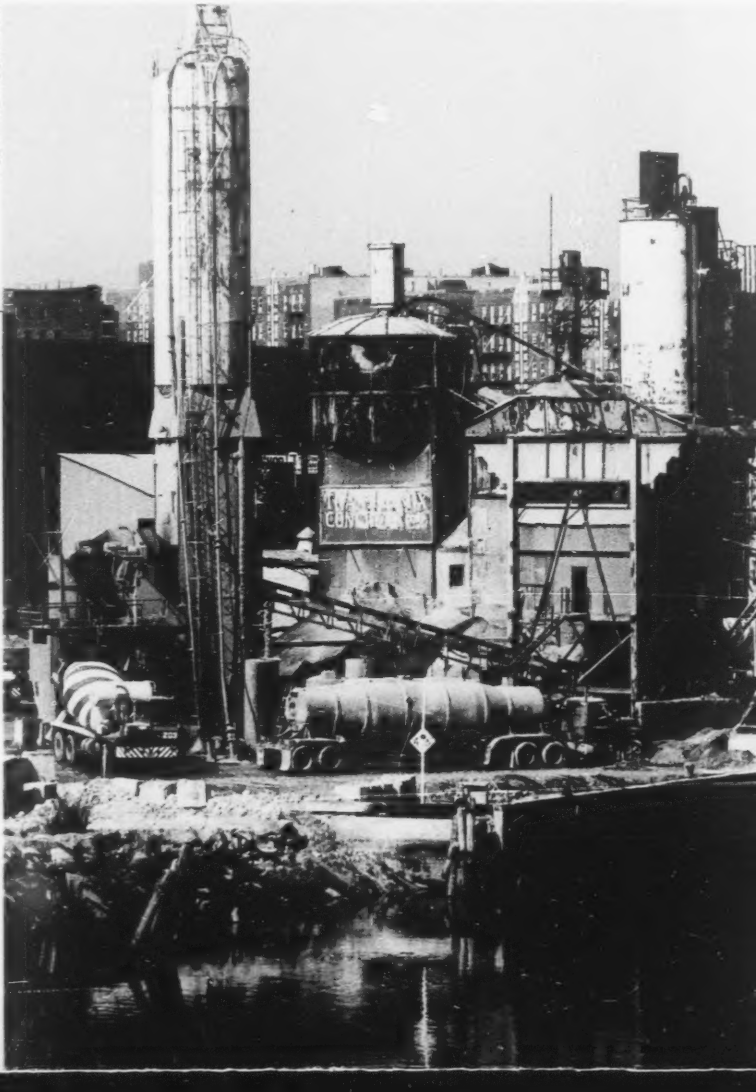
Salerno's power does not stem solely from his position as head of the 300-member-strong Genovese family. Even before he became boss in 1980, Salerno made more money than most Mafia chieftains, mainly by skimming from casinos in Nevada and the Caribbean. Skimming is taking cash off the top of gambling proceeds before they are reported as taxable revenues. Law-abiding casinos take pains to prevent skimming; in mob-controlled casinos the practice is encouraged and widespread. The easiest way to skim is to simply walk into the counting room and take the money, a casino operator was overheard by the FBI to say. A recent indictment charges Salerno and his cohorts with operating a number of illegal gambling joints for betting on numbers and sports. In addition, they make "extortionate extensions and collections of credit"—that's how the Justice Department defines loan-sharking. Salerno is accused of using "threats and beatings to force victims to pay illegal interest and to repay loans."

Crime boss No.1 also has thriving business interests in New York City's construction industry. According to Justice Department disclosures in the Commission case and in another racketeering indictment, between 1981 and 1985, Salerno and his colleagues imposed a 2% Mafia tax on New York City contractors pouring concrete for all superstructures costing more than $2 million. They ran a cartel that rigged bids for supplying the concrete. The cartel decided in advance which company would submit the winning bid. Other companies were forced to put in bids that were unacceptably high. The 2% tax alone produced $3.5 million in profits for the Mafia on the 72 construction jobs the government investigated. That's only a fraction of the buildings that have gone up in New York's recent real estate boom, for which the mob supplied concrete. One witness told the President's Crime Commission that the mob has inflated Manhattan construction costs by as much as 20%.

Salerno, according to the indictment, "is a hidden partner" in a covey of companies that bid on the concrete construction work. Together they have won contracts worth more than $71 million from ten big construction jobs, including Trump Plaza, a luxury apartment building on Manhattan's East Side.

The government charges that bidding on these projects was further rigged in favor of Salerno's companies through collusion with two ready-mix firms: Certified Concrete Co. and Transit-Mix Concrete Corp. Both are owned by Edward J. "Biff" Halloran, who is better known for the midtown hotel Halloran House, which he once owned. He denies any collusion.

Any contractor who dared bid against the mob cartel faced a cutoff of ready-mix or problems with its delivery. The federal indictment charges that Salerno also holds sway over Teamsters Local 282, whose members drive concrete delivery trucks. A punishment for recalcitrant contractors: de-



ANGEL FRANCO—WOODFIN CAMP

CONCRETE AS A MOB WEAPON

Organized crime, the government charges, carried out bid-rigging schemes on the construction of at least 16 Manhattan skyscrapers, including the apartment buildings at far right, by threatening to cut off delivery of concrete from this and other plants. Investigators estimate that such collusion inflates New York City construction costs by as much as 20%.

lays and other, more serious labor problems.

Salerno's hand in union affairs reaches right to the top. The Justice Department charges that it was he who "selected" Roy Williams to lead the International Brotherhood of Teamsters in 1981 and then ordered union officials to elect him president. Williams was imprisoned for conspiring in 1979 to bribe Howard Cannon, then a U.S. Senator from Nevada. Even so, federal prosecutors say that Salerno continues to hold "effective control" of the union under the current president, Jackie Presser.

Tony and his wife, Margaret, often relaxed at their estate in Rhinebeck, New York. For the five years that ended last December, they were a two-income family. The government charges that Marathon Enterprises, a New Jersey food-processing company, paid Margaret "brokerage fees" on sales of hot dogs and other delicatessen foods to supermarkets, sports arenas, and street vendors. She received these payments even on sales to such reputable companies as Chock Full O' Nuts (restaurants), Pathmark (supermarkets), and Canteen Corp. (vending machines). The Justice Department claims that Genovese soldiers arranged the kickbacks by threatening Marathon with "force, violence, and fear of economic loss."

For all his wealth and power, Salerno operated modestly before being arrested. His office was not in one of the gleaming midtown Manhattan towers whose construction costs he had driven up, but in the Palma Boy Social Club, in a storefront in teeming East Harlem. For a long time Salerno attended to business at the Palma or puttered around his Rhinebeck estate without encountering much trouble from the feds. His principal worry was his weight, and he spent weeks at fat farms trying to slim down. The plump times ended after the FBI planted a bug in the Palma Boy Club, which produced much of the evidence for the racketeering charges Salerno now faces. Even if he is convicted and sent to prison, Salerno will probably continue his unchallenged control of the Genovese family.

CHICAGO'S BOSS, Anthony Accardo, 80, boasts that he has never spent a night in jail. Like many a chief executive lately, he was called back from retirement (at the Indian Wells club near Palm Springs, California) when the organization he had long headed faced a sudden management crisis: The leadership of the Chicago Outfit was packed off to jail early this year. Accardo's renewed position raises him to No. 2 on the list.

Accardo is reputed to have been a machine-gunner for Al Capone, and he is called "Joe Batters" by his Mafia cronies because of the baseball bat he formerly used for persuasion. He has always been a master of strategic planning. His formidable Outfit is a racketeering combine that runs everything from diaper services to funeral parlors; its efficiency is envied throughout the Mafia. Accardo was the architect of the intricate power plays that made the Outfit the dominant force in the rackets from the Great Lakes to the Pacific over the past decade. Now, with a cadre of couriers winging back and forth from Chicago to California, he functions as the chairman of the board. His operations chief in Chicago is Joseph Ferriola, 59, a disciplined underboss who survived heart bypass surgery last year and is No. 20 on the list. Ferriola's organizational skills are well known. In the Seventies he muscled back into the fold the bookies in Chicago who had tried to be independent.

Discipline is the Outfit's guiding management principle. The Chicago mob imposes a "street tax" on all illegal activities and on some legitimate ones as well. Bookies, hookers, narcotics peddlers, even owners of bars, restaurants, and parking lots pay from 10% to 50% of their gross revenues, depending on the profitability of their operations and the amount of protection required to keep them running. Another city with a street tax is Philadelphia. But organized-crime leaders there have not been very effective in collecting it—not even after the so-called Docile Don, Angelo Bruno, was murdered in 1980 and replaced by the violence-prone Nicodemo Scarfo (No. 43) in a prolonged 18-death gang war in the City of Brotherly Love.

The Outfit maintains especially tight discipline over its internal security. Chicago insurance executive Allen Dorfman, a sophisticated money manager, pioneered the use of union welfare and pension funds to finance an underworld bank in the 1960s. First he funneled loans from the Teamsters' Central States pension fund to several casino-hotels in Las Vegas. Then he showed Accardo and associates how to establish health care organizations in which participating doctors and dentists gave the Outfit kickbacks after overcharging union patients. Dorfman, who personally received kickbacks for processing the Teamster loans and insurance claims, knew too much about the Outfit's finances. He was gunned down in a suburban Chicago parking lot in 1983.

Beginning in 1970 strongman Anthony Spilotro was stationed in Las Vegas to monitor casino skimming and to see that the money flowed smoothly back to his bosses in Chicago. Known as "Tony the Ant" because of his squat, close-to-the-ground appearance, he did not keep an appropriately low business profile, operating out of a Las Vegas hamburger joint called the Food Factory.

Trump Plaza: *$7.8 million in concrete*

The Columbia: *a $10.4-million contract*

BRIAN ROSE (2)

From there he dabbled in real estate and set up sidelines to control burglary, fencing, and prostitution on the Strip.

But Spilotro failed to keep the skimming operation well disciplined. Some of the men he supposedly controlled turned up as government witnesses, resulting in the January conviction of Chicago's former ruling duo, Joseph Aiuppa (No. 21) and John Philip "Jackie" Cerone (No. 30). Imprisoned with them were seven other gang leaders, including Carl DeLuna (No. 33), the Kansas City mob's comptroller, whose meticulously kept financial records were uncovered by the FBI (see facing page).

Last June, Tony Spilotro and his brother Mike were found buried in an Indiana cornfield. Investigations suggested they had been garroted and may have been buried alive. In any case, they were victims of wise-guy rules: They had not prevented the guys from spilling the beans, so they suffered the consequences. "There's no way Spilotro could have been killed without Accardo's approval," says Patrick Healy, executive director of the Chicago Crime Commission.

STARDUST
Lido
FROM PARIS
Lido
ORANGUTANS

A skimming citadel, *the Stardust is one of the Las Vegas casinos where cash was diverted from counting rooms to the mob.*

ANGEL FRANCO—WOODFIN CAMP

Spilotro's execution may lead to the disintegration of an important peace-keeping pact, hatched by Accardo in 1977, that ceded authority in Las Vegas to the Outfit in Chicago and gave Atlantic City to New York Mafia families. Former FBI agent William Roemer, who spent 23 years tailing Accardo and his cohorts and now is a consultant to the Chicago Crime Commission, says the deal had a grandfather clause. "According to the 1977 agreement, the Eastern mob could keep what it had in Las Vegas, but it couldn't start anything new. Spilotro was there to enforce the edict."

In the confused aftermath of Spilotro's death, competition from New York is challenging the Outfit's hegemony in Las Vegas. Federal and state authorities as well as the Las Vegas police have detected a resurgence of Eastern mob activity, particularly by the Genoveses. "The Outfit's beat up real bad," says an undercover cop. "Not just in Chicago, but here in Las Vegas. The New York guys are taking advantage of it."

Police say that Vincent "Chin" Gigante (No. 19), a Genovese capo, is seizing much of the power previously held by the Outfit and dispensed through Spilotro. Gigante is gigantic, a hulking former boxer who fits the Genovese rough-and-tumble style. He serves on what amounts to the Genoveses' three-man executive committee, with Tony Salerno and Louis Manna (No. 38).

The aftershock of Spilotro's assassination and the vacuum it has left in Las Vegas have hurt the Outfit's reputation on the West Coast. Other mobsters have taken to calling its California operatives the "Mickey Mouse Mafia." This doesn't bode well for West Coast boss Peter Milano (No. 46), who is supported by Accardo in Los Angeles. When a franchise operated by the Outfit turns sour, it can prove terminal for any field representative connected with it. What is happening on the West Coast may be a mild precursor of things to come in Chicago. The aged Accardo has heart disease, and when he dies the Outfit may find itself in turmoil.

AMONG THE MAFIA'S aging executives a true yuppie has emerged. Michael Franzese (No. 18), the son of convicted bank robber and Colombo chieftain John "Sonny" Franzese, is a fast-talking 35-year-old businessman and handsome father of five. He put together a cartel that produced feature movies (including the horror film *Mausoleum* and a youth-gang musical called *Knights of the City*), ran a discothèque, sold and repaired automobiles, operated construction firms, and achieved a near monopoly of independent gasoline sales on Long Island. Mike seemed to strive to shed the reputation of his father, telling the press last year: "Absolutely, I know people that my father associated with. That doesn't mean I have to do business with them, or have to be part of any type life they're alleged to be in. It's all nonsense."

A 28-count, 99-page federal indictment tells another story. The government accuses young Franzese of ripping off more than $5 million in tax fraud, insurance fraud, fraudulent loans, and the fraudulent operation of two auto dealerships. The victims of his car sales scam included General Motors, Mazda Motors of America, and Beneficial Commercial Corp. Investigations also reveal that he cheated New York, New Jersey, and Florida out of hundreds of millions in gasoline taxes.

The gas tax scam was accomplished through what federal prosecutor Jerry D. Bernstein calls a "daisy chain of phony companies." Some 20 Franzese oil and gas distributors would make paper sales of gasoline from one company to another until the whole tax bill was owed by one firm known as the "burnout company." It consisted only of a mailing address, a telephone, and a corporate principal who was an illegal alien. The burnout company, in turn, sold the gas to retailers

THE BOOKKEEPER WHO DID HIS JOB TOO WELL

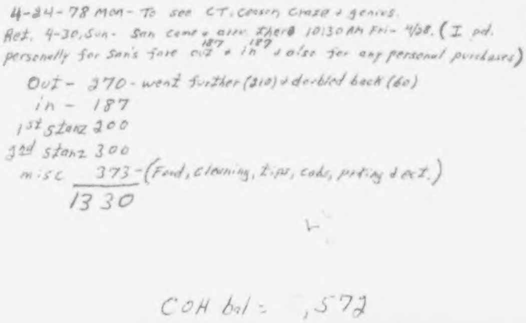
■ As underboss and comptroller of the Kansas City mob, Carl DeLuna felt immense concern for his fiduciary responsibilities. "Toughy," as he is known, called his meticulous record keeping "doin' the right thing." It proved much too right. In January his handwritten documentation of how cash was skimmed from the Tropicana and Stardust casinos in Las Vegas sent nine gangsters to jail, including DeLuna.

The ledgers revealed that between 1976 and 1979, the mob extracted $2.3 million from the two casinos' counting rooms before taxable revenues had been declared. In an October 1977 entry, DeLuna recorded the sitdown in Chicago at which top mob executives determined how the skimming operation would work. The notes proved DeLuna as reliable a recording secretary as he was a bookkeeper. Until the documents were uncovered, federal authorities never suspected that a mobster would keep a record of so important a conclave.

The crime bosses who convened in Chicago agreed that couriers—one DeLuna code-named "Deerhunter" and another, a Chicago policeman he called "Stompy"—would deliver the loot each month to the families in Kansas City, Milwaukee, Chicago, and Cleveland. Distribution of the cash was done the same way corporations declare dividends. The mob bosses and underbosses in the four cities held shares, or "points," in the Stardust and Tropicana; they received a certain amount for each share.

Sometimes the shareholders received extra dividends: DeLuna's ledger shows that skimming produced a $130,000 bonus in January 1979 that he called a "surprise number." The next regular dividend, however, failed to materialize. DeLuna recorded the reason: A key skimmer got sick.

FBI agent William N. Ouseley, who found the books hidden in the basement, attic, and ventilating ducts of DeLuna's house, had no trouble cracking the code that camouflaged the various entries. No. 22, for example, stood for Chicago boss Joe Aiuppa. No. 21 was Aiuppa's enforcer, Jackie Cerone. The nicknames "Fancypants" or "Beerman" applied to Frank Balistrieri, the Milwaukee boss. "ON" (for *onorevole*, meaning honorable in Italian) was Nick Civella, the Kansas City Mafia chief and DeLuna's boss.



4-24-78 Mon - To see CT, Ceaser, Craze & genius.
Ret. 4-30, Sun - San came & arr. there 10:30 AM Fri - 4/28. (I pd. personally for San's fare out^{187} & in^{187} & also for any personal purchases)
Out - 370 - went further (310) & doubled back (60)
in - 187
1st stanz 200
2nd stanz 300
misc 373 - (Food, cleaning, tips, cabs, [illegible] & ect.)
1330

COH bal = ,572

MIKE MARE—WOODFIN CAMP

DELUNA'S UNLUCKY LEDGERS

The code above itemizes $1,330 in expenses for DeLuna's 1978 trip to Las Vegas to force mob front man Allen Glick ("Genius") to sell his two casinos. "In" and "out" represent round-trip airfare. "Stanz" stands for room in Italian.

BO RADER—KANSAS CITY TIMES

DeLuna was a cautious accountant. If he did not actually see the money change hands, he said so to distance himself from any defalcations.

He embarked on an important mission in 1978. His assignment: to force Allen R. Glick ("Genius"), the licensed owner of the Stardust and another casino-hotel, the Fremont, to sell out or risk the murder of his two children. The mob, which had begun to distrust Glick, thought it could skim more under another owner. In Las Vegas, DeLuna met first with three members of the Mafia's skimming team: Carl Thomas ("CT" in the ledger page below), a gambling boss at the Tropicana; Joe Agosto ("Ceaser"), casino manager at the Tropicana; and Frank "Lefty" Rosenthal ("Craze"), the mob's man at the Stardust. Next he met Glick, who two days later announced his casinos were for sale.

Four days after DeLuna left for Las Vegas, his wife, Sandy ("San"), followed for the weekend. True to form, DeLuna's accounts show that he paid "personally for San's fare out and in and also for any personal purchases." As one of DeLuna's cronies confided to the FBI, "He kept track of who got what, just so if anybody asked, he could show everything was right, that he hadn't grabbed a dime of that money for himself."

The carefully kept records were only partially responsible for the jailing of Chicago's then Mafia leaders, Aiuppa and Cerone. The testimony provided by Glick, who told about the threats the mob used to force him to unload his casinos, also helped. So did the mob's avarice. The Chicagoans might never have turned up in DeLuna's ledgers if they had not tried to make the most of their role as conciliators. They tried to mediate between the bosses in Kansas City, Milwaukee, and Cleveland who got to squabbling over the casino spoils in 1975. For their efforts the Chicago mob demanded a 25% fee.

DeLuna's books depict Mafia benevolence toward both the greedy and the needy. In 1979, $1,500 went to then Kansas City Teamster chief Roy Williams, code-named "Rancher," who used his influence to help arrange Teamster loans to the mob-controlled casino-hotels. The skimming money also supported a welfare program. DeLuna once noted that after he, Civella, and the others divided some $30,000, smaller amounts ranging from $1,000 to $3,000 were handed out to elderly Mafiosi and to the families of imprisoned mobsters.

MARDI GRAS
CONTINUOUS DANCING & ENTERTAINMENT
girls
girls
girls
girls
girls
girls
MARDI GRAS Lounge
KITTYKAT
MARDI·GRAS

ANGEL FRANCO—WOODFIN CAMP

The Mardi Gras, *a girlie bar in Manhattan, was one of many businesses operated by Genovese capo Matthew Ianniello, No. 35.*

with an invoice marked "all taxes paid." Then the burnout company would declare bankruptcy, and Franzese would create another daisy chain.

In spite of his clean-cut image, Mike Franzese inherited his father's business tactics and violent ways. According to Bernstein, one of his goons broke the head of a competitor with a ball peen hammer. And an auditor who questioned Franzese's books was threatened by a Franzese associate: "You don't know who you're *bleeping* with. We'll cut your heart out." Franzese told a friend who could implicate him in the gasoline tax scam that the man's son would be murdered if he didn't vanish beyond the reach of U.S. courts. The man fled to Panama. Four months later he returned in federal custody to testify against Franzese.

In March, Franzese agreed to plead guilty to racketeering and conspiracy charges, accept a prison term of ten years, forfeit assets worth $4.8 million, and pay an additional $10 million to the states defrauded in the gasoline tax scam. He was able to persuade the Justice Department that he couldn't possibly come up with the $14.8 million if he was stuck behind bars—not even after selling his various houses and signing over his movie rights. An extraordinary deal was struck. Before going to prison, Franzese was permitted limited freedom under the guard of deputy U.S. marshals. The surveillance costs were to be paid by Franzese, who was soon seen (and to the embarrassment of the government filmed by an NBC-TV news crew) scurrying around Hollywood with his posse in tow. The farce ended when Franzese, reverting to form, gave a bad check to the U.S. Marshals Service to pay for his guards. A federal judge sent him off to prison.

The investigation of Franzese's affairs revealed yet another crooked business—the 700-member Allied International Union, a large labor union of private security guards. Its members worked in sensitive spots as diverse as nuclear power plants and gambling casinos. Allied International had been a joint venture of the Genoveses, Gambinos, and Colombos. But when the Genovese and Gambino partners died, it became exclusively a Colombo operation.

Before Allied International came under Franzese's wing, Daniel Cunningham, a builder in Smithtown, Long Island, thought he had bought control of the union from one of the Genoveses for $90,000. Cunningham saw a way to get rich. He took $134,000 a year in salary and expenses and put his wife, ex-wife, and girlfriend on the union payroll. Cunningham admitted trying to call a guard strike against five nuclear power plants along the Eastern Seaboard, including Three Mile Island, and threatening to strike the Atlantic City casinos. He was indicted for embezzlement, racketeering, and bribery in 1981.

Testifying last year before the President's Commission on Organized Crime, Cunningham explained that when he attempted to sell control of the union to Mike Franzese after going to jail, the latter responded: "Why should I buy something I already own?" Cunningham reported that he was replaced by one of Franzese's sidekicks, who promptly shifted the union's pension fund to a Virgin Islands insurance company that granted Franzese a home mortgage free not only of interest but of principal payments as well.

GARBAGE COLLECTION, which depends on union control, has been a favorite Mafia target. Mob leaders tried unsuccessfully to infiltrate this business in Chicago, Des Moines, and other cities, but succeeded in the New York area, where municipal governments provide garbage pickup just for houses and apartments. Restaurants, hotels, nightclubs, even the United Nations do not get the city's Sanitation Department services; private companies, called carters, do the job. The carters allocate customers among themselves, buying and selling client businesses for from $2,000 to $2 million each. What the carters are buying is the right to overcharge.

Peter Reuter, senior economist with Rand Corp., figures that the allocation scheme inflates private garbage collection prices from 35% to 65% in New York. The harder prosecutors pursue the racketeers, the more notorious the garbage business becomes and the less attractive the business is to legitimate competitors. Says Reuter: "That is the value of a bad reputation."

The only competition is among Mafia families vying for the business. On Long Island the Lucchese and the Gambinos struck a deal to split garbage collection payoffs from various carters. Anthony Corallo (No. 3), the Lucchese boss who is standing trial with Tony Salerno, controlled the employers' group, Private Sanitation Industries Associates Inc. James Failla (No. 36), a Gambino capo, held sway over the garbage truck drivers as overseer of Teamsters Local 813. Every three months Corallo had to pay Failla $50,000 for his cooperation.

Corallo, called "Tony Ducks" because of his previous success in ducking subpoenas, and Salvatore Avellino, his chauffeur-enforcer, thought the best way to eliminate payments to Failla was to start a rival Teamsters local. Through a bug planted behind the dashboard of Avellino's Jaguar, the New York State Organized Crime Task Force overheard him telling a friend how such a rival union could be organized and used: "Let's take a son-in-law, somebody, put them into the [union] office; they got a job. Let's take somebody's daughter, whatever, she's the secretary. Let's staff it with our people." Then, so his listener fully understood how the new union's leaders would dispense with a dissident, Avellino added: "and when we say go break this guy's balls . . . they're there, seven o'clock in the morning to break the guy's balls."

Avellino went on to detail how profitable a union could be in overcharging for phantom garbage: "This is what he [Corallo] tells me. A strong union makes money for everybody, including the wise guys . . . because the envelopes [of money] . . . are bigger and better . . . 2,000, 5,000, 10,000, 20,000, 30,000, 50,000 . . . I can't even carry them."

Corallo did not start a Teamster local to rival the Gambino one. But he controls others, notably Teamster locals 295 and 851, whose members play a key role in the $4.2-billion-a-year air freight business at New York's Kennedy Airport. His union clout helped block the proposed $63-million merger in 1983 of Air Express International and CF Air Freight, a subsidiary of Consolidated Freightways. According to Air Express's labor contract, the company had to continue the existing Teamster pact, even if it merged. That was unacceptable to Consolidated. Corallo's men offered to abrogate the contract for $500,000 in cash. Both companies balked at the shakedown and abandoned the merger plan.

Corallo's extortion attempts were usually more successful. Six air freight companies operating at Kennedy—Air Express, Union Air Transport, Kamino Air Transport, Schenkers International Forwarders, Three Way Corp., and Hi's Airport Service—funneled more than $1.1 million to the Corallo mob between 1978 and 1985. FBI wiretaps on the home phone of Corallo's airport overseer revealed the payoffs. Paul Vario (No. 32) and three other Corallo lieutenants pleaded guilty.

IN MANY CITIES mobsters use Teamster connections to shake down legitimate companies. In Detroit, Vincent Meli (No. 41) captured the entire steel-hauling business with the connivance of crooked Teamster officials in Local 124. His trucking company, Trans-Steel, obtained such favorable contracts that it did not even pay drivers fringe benefits. Meli drove all his competitors out of business. "I know of no other industry in the area where organized crime has achieved such control," says Craig Woodhouse, an investigator for the Department of Labor.

Mafia entrepreneurship took a different tack in Scranton, Pennsylvania. There Eugene Boffa, an associate of the local Mafia

THE MOB'S OUTSIDE CONSULTANTS

■ Consultants are almost as popular with organized crime families as they are with corporations. These special counsellors —lawyers, labor experts, and political advisers—shuttle between members of the mob and moviemakers, hotel and casino operators, owners of professional sports franchises, corporate chief executives, and public officeholders. They claim to be aboveboard with nothing to hide. But when forced to testify under oath about their underworld connections, they usually become vague.

Chicago lawyer Sidney R. Korshak has represented Hilton Hotels Corp., the Los Angeles Dodgers, and numerous other corporations. Nevertheless, former FBI agent William Roemer describes Korshak as "the most important link between organized crime and legitimate business." He has a marvelous ability to help his clients settle labor difficulties.

Korshak has always been careful to conceal his organized-crime connections. Investigators learned, however, that in 1958 he helped Tony Accardo draw up a contract that paid the Chicago mob boss $65,000 a year as an employee of a wholesaler called Premium Beer Sales. An FBI bug planted in a mob hangout revealed that Korshak used the code name "Mr. Lincoln" in his underworld dealings. Jimmy Fratianno, a gangster-turned-informer, said in his biography *The Last Mafioso*, that the now-imprisoned former Chicago boss Joe Aiuppa told him: "Sid is our man," adding that he has "been our man his whole life." In 1983 Joseph Hauser, a convicted insurance swindler, testified before a Senate labor investigation that Accardo had told him "on several occasions [that] he had sent Korshak to Los Angeles to represent the mob there."

Two years ago Korshak shed a little light on his fixer's role with Hilton. During the hotel's unsuccessful attempt to get a casino license in New Jersey, Chairman Barron Hilton announced that he was dropping Korshak's services because of the Division of Gaming Enforcement's concern about Korshak's underworld connections. The hotel had previously paid him $700,000 in fees.

Korshak fired off an angry response to the chairman that was later turned over to the state's gaming investigators: "I read with interest your disparaging remarks about me," he wrote. "When did you discover that I was associated with characters that shocked your most decent sensibilities?" Korshak added: "You will remember calling me in Las Vegas at six one morning while you were with [movie executives] Kirk Kerkorian and Frank Rothman to ask the unions involved not to strike you. As you well know, there was no fee involved."

Labor consultant Jack McCarthy is still in business even after taking on Rico Construction Co. of Long Island as a client in 1979. Facetiously named after the antiracketeering statute, Rico was an FBI front. In a series of secretly taped conversations, McCarthy agreed to get Rico non-union carpenters for a $5,000 bribe and a promise of future payments.

McCarthy had already served time for accepting kickbacks on Teamster pension fund loans and should have suspected that he was being set up. But he did not. Soon he lured Teddy Maritas, boss of the District Council of Carpenters, into the taped conversations. The FBI promptly arrested Maritas and tried him for working with gangsters to rig bids and shake down contractors. The jury was unable to reach a verdict, and Maritas disappeared before he could be retried. Authorities believe he was murdered. McCarthy pleaded guilty to extortion and went to prison again. He was freed in 1982, but is still under close watch. "We intend to limit history from repeating itself," says Ray Maria, deputy inspector general of the Labor Department.

In Chicago politics and organized crime have always been linked. The FBI has had Pat Marcy, a 1st Ward Democratic leader, under surveillance since the late 1960s. Former FBI agent Roemer told Senate investigators in 1983, "Marcy has been calling the shots of the mob as far as politics is concerned for many, many, many years. He was the conduit through which orders of the Outfit passed to those politicians and public officials who were under their control." And he still is.

boss Russell Bufalino (No. 12), organized what he called a "labor leasing" business. The President's Commission on Organized Crime reported that to get the new venture off the ground, Boffa gave "bribes and kickbacks" to "corrupt Teamsters," including President Jackie Presser. Boffa established 30 labor-leasing companies to provide truck drivers to such giants as Shell Oil Co., Continental Corp., Coca-Cola, American Cyanamid, Crown Zellerbach, and International Paper.

The labor-leasing scheme worked like this: The client "corporations would fire all of their drivers and Boffa would rehire them at a reduced wage," the President's Commission reported. In return, Boffa received fees ranging from 7% to 10% of the drivers' gross wages. Then he handed over 50% of his share to boss Bufalino.

The surest way to get ahead in the Mafia is to kill. That explains the sudden rise to prominence of John Gotti (No. 13). As a petty crook, Gotti had the humiliating habit of getting caught, usually as a result of sloppy bravado. Though he is only 46, he has served prison terms of one year for attempted burglary and four years for stealing truckloads of clothing at Kennedy Airport, and he is on trial for hijacking armored trucks. Law enforcement authorities say he arranged the execution last December of Gambino boss "Big Paul" Castellano and his bodyguard outside Sparks Steak House in Manhattan.

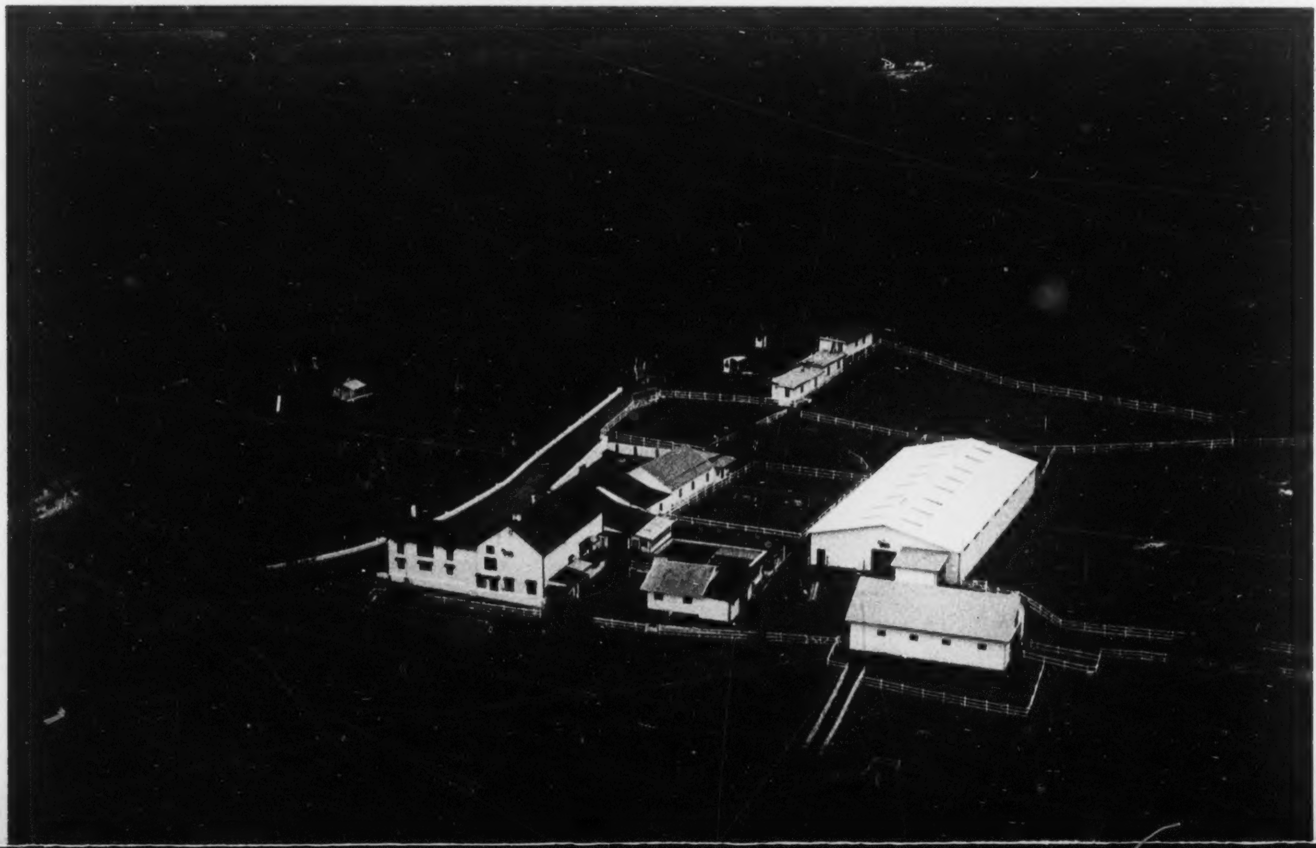
THE PRESS portrays Gotti as the new boss of the Gambino clan and the reincarnation of Al Capone. His custom-tailoring, his black Mercedes 450 SL, his wisecracks in court, even his carefully coiffed pompadour made him a sudden sensation. But his superstar status is more image than substance. He claims to be a distributor of phonograph records. His experience is really as a loan shark, hijacker, and hit man. He does not seem qualified to run the Gambino family's complex businesses, which range from meat and poultry sales to a garment industry trade association. Besides, if he is sentenced to the maximum 45-year prison term, his newly acquired and self-proclaimed control over the Gambino family would evaporate.

The President's Commission on Organized Crime reported that the Gambino meat and grocery operations are so vast that legitimate food producers feel compelled to deal with them. Paul Castellano, Gotti's victim, ran Dial Poultry Co., a large distribution company in Brooklyn, now managed by his sons Paul Jr. and Joseph. Big Paul's cousin Peter Castellana Sr. is listed as sales manager of Quarex Industries, another wholesale company with sales of more than $100 million.

Frank Perdue, who heads the famous $840-million-a-year chicken processing company, used Dial Poultry to distribute his chickens. Perdue's relationship with the Castellanos, as the President's Commission put it, shows that some legitimate businessmen turn to "organized crime-connected companies" to gain a competitive edge.

Initially, Perdue told the President's Commission, he was reluctant to have anything to do with Dial because of Paul Castellano's notoriety as a Mafioso. But when Perdue saw Dial as a way of expanding his sales, he recalled, "I started saying to myself, 'Why shouldn't I have some of that business?' " As his sales to Dial increased, Perdue sought Big Paul's help in fighting a union-organizing campaign at his processing plant in Accomac, Virginia. Perdue explained: "I just thought, you know, they have long tentacles, shall we say, and I figured he may be able to help." By long tentacles, Perdue said that he meant

The good life: *Tony Salerno and his wife, Margaret, enjoyed their picturesque estate in Rhinebeck, New York, which includes barns and a riding ring.*



GORDON/TRAUB—WAYFARER

"Mafia" and "mob" connections. Castellano, who said, "Accomac is a long way from Brooklyn," did not do anything to help Perdue.

The Mafia's net income, the gross revenues less such overhead costs as salaries, transportation, entertainment, and payoffs, is conservatively estimated at $30 billion a year by the President's commission. But the profits present a bit of a problem. Much of the money comes in $10 and $20 bills; making a big purchase with, say, hundreds of pounds of greenbacks could be incriminating. Before this dirty money can be safely spent or pumped into legitimate businesses, it must be laundered.

One solution is to employ clandestine couriers to transport the cash to banks in the Bahamas, Switzerland, or Hong Kong. But an easier way was the system used by Gennaro Angiulo (No. 34), the silver-haired underboss in Boston. Workers in Angiulo's North End headquarters merely stuffed the money into brown grocery bags and walked three blocks to a branch of the First National Bank of Boston. They returned with cashier's checks.

Even though Angiulo acquired an oceanfront estate in suburban Nahant and a $320,000 yacht to go with it, his bucket brigade of deposits drew no special attention. The myriad transactions occurred despite a federal regulation passed in 1970 that required all banks to report cash receipts of $10,000 or more. In 1981 the U.S. government deployed agents to eavesdrop on Angiulo's operation. The inquiry resulted in racketeering charges against Angiulo and deep trouble for the Boston bank.

Angiulo's associates purchased cashier's checks totaling $8.3 million between 1979 and 1982, according to the federal investigation. The bank failed to report 105 checks bought for $1.8 million in cash, as well as some $1.2 billion in foreign cash transfers, unrelated to Angiulo. The bank pleaded guilty and was fined $500,000. Angiulo was fined $120,000 and sent to prison for 45 years. At his trial it was disclosed that the FBI, using wiretaps, had overheard the following admissions:

"We buried 20 Irishmen to take this town over," bragged Angiulo. "We are bookmakers. We're selling marijuana. We are illegal here, illegal there. Arsonists. We are everything."

"Pimps," added a sidekick.

"So what!" snapped Angiulo, unwilling, it seemed, to omit one division from his complete catalogue of businesses. ■

AN EQUAL OPPORTUNITY EMPLOYER

■ Organized crime in the U.S. is not a Mafia monopoly. Members of the Chinese Triad secret societies and Japanese Yakuza have acquired growing influence in Hawaii and on the West Coast, where their legal and illegal enterprises range from prostitution and heroin to commercial real estate. Vietnamese underworld gangs operate in California and Texas, and the so-called Israeli Mafia is based in Los Angeles. Even a Russian emigré gang works extortion and narcotics rings in New York City. And in September a jury convicted 11 members of a Taiwanese crime syndicate, United Bamboo, of racketeering and drug dealing in the same Manhattan courthouse where eight of the top 50 Mafia bosses are now on trial.

At least three other groups have become strong enough to strike deals with the Italian-American mob. Most powerful are Colombian cocaine and marijuana traffickers, who are shattering the widely held assumption of Mafia omnipotence.

For one thing, the Colombians' sources of supply, their cocaine-processing labs, and their armed strongholds in Latin America are beyond the Mafia's reach. For another, Colombian gunmen in the U.S. are known not only for shooting their targets, but for picking off the victims' relatives as well. Even Genovese and Bonanno hitters are afraid to challenge these wild men, preferring a policy of appeasement, and a cut of the profits for serving as their distributors.

Perhaps the biggest cocaine trafficker is Colombian Carlos Enrique Lehder Rivas, 38, a fugitive from the Drug Enforcement Administration who is also known as Joe Lehder. Arrested in Detroit in 1973 for smuggling stolen cars, Lehder was imprisoned for two years and then deported to Bogotá. Back home he got into the drug business, acquiring jungle plantations and processing labs. He also assembled a private army and a fleet of fast ships and planes, and built a well-guarded base for his smuggling activities on Norman's Cay in the Bahamas.

With the assistance of fugitive American financier Robert Vesco, Lehder's men struck a deal with Fidel Castro's officials to let drug-laden planes fly through Cuban air space unimpeded for two hours a day. Federal agents estimate that Lehder's cocaine sales in the U.S. range from 500 to 1,000 kilos a week. At a rock-bottom price of $6,000 per kilo, his annual revenues would come to between $160 million and $320 million.

U.S. agents investigating Lehder believe he is hooked on his own wares. He fancies himself a Marxist revolutionary called "Comandante Rambo" but runs his far-flung operations from the cockpit of a Learjet. He also owns a newspaper that publishes anti-U.S. diatribes. He pronounced death threats against U.S. diplomats in Colombia and the agents trying to close down his business on American soil.

Cocaine king *from Colombia, Carlos Lehder Rivas is wanted by the feds.*

Other crime groups, such as the Pagan Motorcycle Club and the Cuban "Corporation," have also reached accommodation with various Mafia families. The Pagan "bikers," who are Americans, work with the Philadelphia mob in drug trafficking and extortions, while the Corporation (estimated annual net profit: $45 million) operates numbers games in New York and New Jersey. The Cubans reportedly surrender a small percentage of their gross revenues to the Genoveses and Bonannos. But in Gambino territory the split goes the other way. To keep the peace, the Gambinos give 35% of all gambling proceeds—horses, casinos, and numbers—to the Cubans.

A RUST BELT CITY TAKES ON A SHINE

Cities galore play the game of wooing new industry. But few have wooed more ardently—or reversed an economic slide faster—than Fort Wayne and its go-getting mayor, Win Moses. The city bagged jobs by sticking to what it knows best: manufacturing.

■ *by Jeremy Main*

EVEN AMONG Rust Belt cities devastated by the recession and the decline of heavy manufacturing, Fort Wayne, Indiana, seemed in 1982 to be down on its luck. In March, a once-in-a-century flood swept the city's downtown, which in any case had pretty well fallen apart. In the fall, International Harvester, Fort Wayne's biggest employer and the company generations of Fort Wayners had counted on for permanent and well-paid employment, announced it was shutting down its truck-building operations. When winter set in, friends and relatives ferried hot coffee to those waiting in lines that curled around the block at the unemployment office. The soup kitchen run by St. Mary's Catholic Church served 1,100 meals a day—in a city of 170,000. By February 1983, unemployment in Fort Wayne peaked at 14.5%, vs. a U.S. average of 11.3%.

Since those dismal days Fort Wayne, whose metropolitan area comprises three counties with a population of 350,000, has mounted such a strong economic recovery that unemployment, now 5.7%, is 1.3 percentage points below the national average. Fort Wayne has proved that being an industrial city in the Rust Belt is not an incurable disease. Other industrial Midwestern cities have barely begun their recovery (see table), and the region as a whole is only slightly better off than it was four years ago.

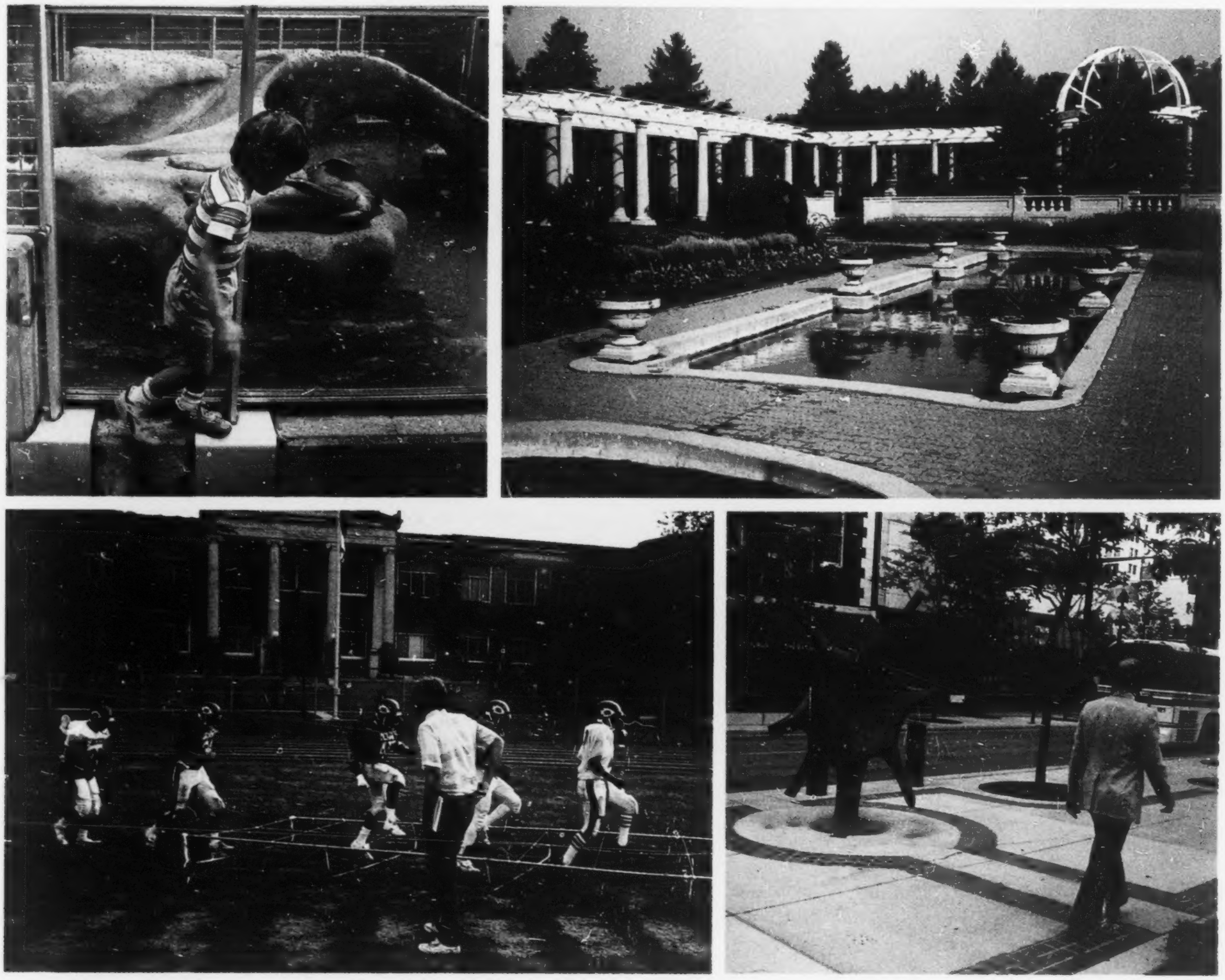
In December, Fort Wayne will crown its job-hunting campaign when General Motors starts making pickup trucks at a new $500-million plant. The highly automated plant, GM's most modern for the moment, will employ 3,000 people, mostly workers brought in from GM sites elsewhere. Their paychecks will add fuel to the local economy, creating an estimated 3,500 additional jobs. Burlington Air Express, the second-largest air freight service in the U.S., last year made Fort Wayne its national hub. The city has also persuaded companies long established in the area, such as GE, ITT, and Magnavox, to expand rather than cut their work forces or pull out.

Instead of letting Fort Wayne lie down and die in 1982, politicians, businessmen, labor leaders, philanthropists, and many ordinary citizens responded with a single-minded drive to make the city well again. Its leaders include Ian M. Rolland, 53, president and chief executive of Lincoln National Corp. (assets: $13.5 billion), which ranks 15th on FORTUNE's list of diversified financial companies, and Richard K. Doermer, 63, president of Summit Bank (assets: $1.2 billion).

Home-grown, like Lincoln National, Rolland is a contributor and activist. He led an effort to turn the moribund chamber of commerce into an aggressive, well-financed pursuer of new business. He headed a $4-million campaign to build a new art museum and is now running a $7-million campaign for the city's Fine Arts Foundation. Rolland has also pushed the local school authorities to speed up the integration of the inner-city elementary schools, which remain mostly black. Doermer has hit the road and telephone in an effort to cajole companies to move to Fort Wayne or expand there.

Winfield Moses Jr., a pudgy, cheerful young homebuilder with a rich mop of dark hair, became the city's chief cheerleader and sales-

In the grim years, *Fort Wayners feared that ribbon-cuttings were a thing of the past. Recently Mayor Moses (center) opened an exhibit of houses built to meet a growing market.*



Quality of Life That Sells a City

Fort Wayne's government and civic leaders have pushed for amenities to make Fort Wayne a more attractive place to live—and therefore more likely to lure new business. Some of the attractions include (clockwise from bottom left): good schools; a children's zoo undergoing expansion; well-tended and ample parks; and downtown improvements, such as a block of Calhoun Street with new trees, benches, and sculpture on the sidewalk.

man after he was elected mayor in 1979. Says Moses: "Essentially, we buy jobs, just as you buy any product." Fort Wayne buys jobs with low-interest financing, tax abatements, grants, gifts, job training, and city amenities such as those above. Other cities pitch such attractions, but Fort Wayne does it so wholeheartedly, and with such close cooperation between city officials and business, that the results are spectacular. The metropolitan area hasn't yet won back all 37,600 jobs it lost in the early 1980s, but it has regained 35,400, boosting the recent total to 180,200. That does not count new jobs in the pipeline, including those to be generated by GM.

Success doesn't mean Fort Wayne has stopped hurting. St. Mary's soup kitchen now serves 1,200 meals a day. Ed Elkins, who runs the East Wayne Street Center, a private charitable group, says the city still has a "very significant underclass" of people who don't have the skills to learn sophisticated new manufacturing jobs. Many are blacks, the only significant minority, who make up 15% of the city's population. Some old International Harvester employees—no one calls it by its new name, Navistar—are still looking for work. Those who find it can rarely match the average $12.50 an hour once paid by Harvester, although GM will be paying assembly workers $13 an hour.

For all the hangovers from the recession, Fort Wayne is booming. Part of the city's success is sheer luck—the luck of being on Interstate 69 within half a day's truck drive of much of industrial America, and the luck of being in Indiana, which treats business handsomely. Indiana has generous tax abatements, minimal bureaucratic red tape, and a Republican state government that seeks new business enthusiastically, even for Fort Wayne and its Democratic mayor. Indiana also has the lowest insurance rates for worker's compensation and the lowest unemployment insurance taxes in the U.S.

Fort Wayne has a well of originality and gumption to draw on to solve its problems, going back to 1885 when Sylvanus Bowser invented a device that led to the modern gas station pump. Another invention made the city the center of the production of magnetic wire used in electric motors. The late Senator Homer Capehart put his Capehart Auto-

REPORTER ASSOCIATE *Rosalind Klein Berlin*

PHOTOGRAPHS BY RON GEIBERT

Local movers *include Lincoln National chief Ian Rolland and his equally activist wife, Mimi.*

matic Phonograph Co. in Fort Wayne and won a patent for the jukebox in 1931. Philo Farnsworth, one of the inventors of TV and founder of a company bearing his name, acquired Capehart in 1939, and ITT bought the merged companies in 1949. In the 1930s Magnavox, headquartered in Fort Wayne but since acquired by the Dutch company Philips, coined the terms "woofer," "tweeter," and "stereophonic." In the same decade local GE engineers developed the garbage disposal, nicknaming it the electric pig.

So successful was Fort Wayne that its business leaders grew complacent about attracting new business in the 1970s. "Our marketing skills as a community were nonexistent," says Thomas J. Eckrich, 48, who owns and runs a real estate firm called Northill Development Corp. But even before the need became obvious, Moses was reshaping the city government to make it an instrument of economic growth. In 1981 he raised Fort Wayne's obscure office of urban grants to a cabinet-level department of economic development responsible for all the services a new company might want, such as tax abatements and financing.

Even opponents admit that Moses has done well for the city. Indiana politics can get rough, and the mayor has had his battles with the Republicans who rule surrounding Allen County. But when it comes to creating jobs, they work together. In many other cities giveaways to new industry have led to grousing by companies long on the scene that get nothing. Some cities have sued to force companies to live up to their promises. Not in Fort Wayne. "There's a lot I don't like about Moses," says Orvas Beers, the powerful Allen County Republican chairman, "and he takes a lot of credit he doesn't deserve, but he's an asset." Beers adds slyly, "He is a lot more popular than you'd expect after being charged with felonies."

UNEMPLOYMENT RATES

1983		1986	
Detroit	16.7%	Detroit	9.1%
FORT WAYNE	**14.5%**	Cleveland	7.5%
Akron	14.5%	Pittsburgh	7.4%
Pittsburgh	13.3%	Chicago	7.2%
Milwaukee	13.3%	Akron	7.2%
Cleveland	13.0%	U.S.	7.0%
Chicago	12.1%	Milwaukee	6.1%
Indianapolis	11.5%	Columbus	5.8%
U.S.	11.3%	**FORT WAYNE**	**5.7%**
Columbus	10.3%	Indianapolis	5.1%
Minneapolis	8.4%	Minneapolis	4.1%

SOURCE: BLS CHICAGO REGIONAL OFFICE

Joblessness Slashed

When the jobless rate for the Fort Wayne metropolitan area peaked in February 1983, it was among the worst in the U.S. According to July figures, not seasonally adjusted, the city is now doing better than the U.S. as a whole and most of its Rust Belt counterparts.

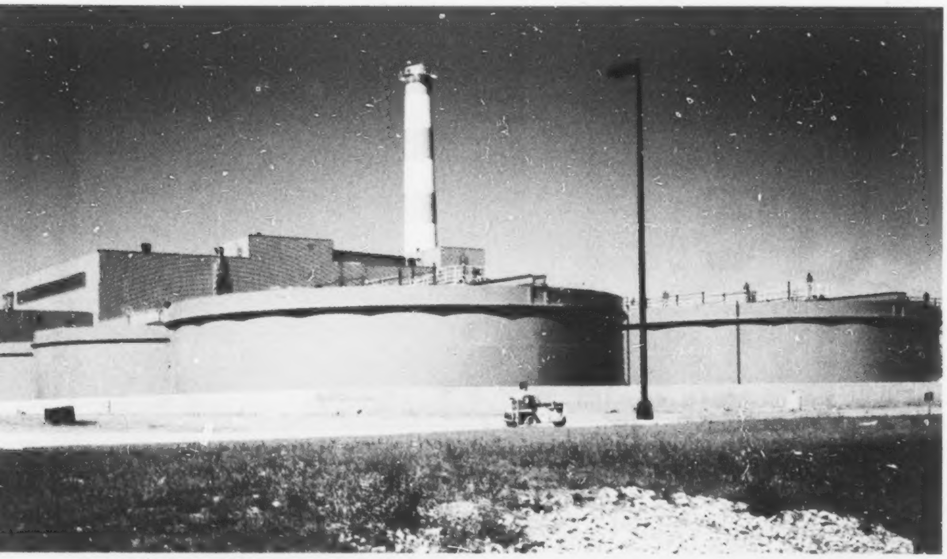
After Moses won reelection in 1983 by a 73% majority, his opponent charged him with failing to report a campaign expenditure, and he was indicted for felonies. After plea bargaining, he was convicted of misdemeanors and received a fine and a suspended sentence. He resigned and was immediately reappointed mayor by the town's Democratic precinct chiefs. Stewart Spencer, editor of the *News-Sentinel*, says the public dismisses the incident as the "political equivalent of a speeding ticket."

THE CITY'S business leaders were slower than Moses to see what was needed. The events of 1982 changed all that. First, an outpouring of volunteers to build sandbag dikes during the flood showed that the city still had plenty of spirit. The city's leaders woke up when they heard Harvester might leave. The company had already cut its work force sharply from a peak of 10,500 in 1979. Says Summit Bank's Doermer: "Up to the time of the International Harvester closing, we had been wringing our hands, but that rallied us."

At first, Fort Wayne fought to keep Harvester. Moses, now 43, slimmer and a little gray, remembers the summer of 1982 as "120 physically excruciating days." Harvester had truck operations in Springfield, Ohio, and Fort Wayne, and decided to concentrate production in one of these cities. The company told Fort Wayne the state of Ohio had promised to give it $30 million. What could Fort Wayne do against the might of Ohio? Much to their own surprise, the city leaders worked out a matching $30-million package, with only $4 million from the state. Moses and others made half a dozen visits to Harvester headquarters in Chicago. But in the end, the company shut the Fort Wayne plant and laid off its remaining 2,800 workers.

Even in the middle of the Harvester battle, Rolland and others began to reorganize their marketing efforts. To fire up the clubby chamber of commerce, they brought in a colorful new boss, Richard G. Clark, who somehow was able to convey optimism even as Harvester pulled out. Other organizations such as the Convention and Visitors' Bureau were brought under Clark's umbrella, concentrating the city's energies.

To finance Clark's efforts, the chamber temporarily hired a successful fund-raiser from Notre Dame University, Thomas Pilot, and set out to raise $6.3 million. Exceeding its goal by 50%, the chamber gathered $9.2



GM's $500-million truck plant, *which will employ 3,500, is Fort Wayne's best catch so far.*

million with the help of $1 million from the city, $500,000 from Rolland's Lincoln National, and another $500,000 from a local foundation. The money went for beefing up the staff of the chamber, hiring a New York public relations firm, placing ads in business magazines, and sending teams out to sell businesses on moving to the Fort Wayne area. Doermer recalls a successful visit to Appleton to help persuade Air Wisconsin to put its central maintenance facility at Baer Field, an airport jointly operated by the city and Allen County.

ROLLAND AND OTHERS pushed for the creation of a Corporate Council of 40 of the top leaders in the area, including businessmen, the mayor, educators, and county officials. The council's goal is not only to attract business, but also to make the city a more attractive place. The basics were already there—a well-run city with well-manicured parks full of flower beds; attractive, reasonably priced housing; and a peaceful atmosphere rarely spoiled by anything as rude as a car's horn.

Although much of downtown Fort Wayne is still a wasteland of parking lots and boarded-up stores, the revival is well under way. In addition to a new art museum, the city has a $5-million botanical garden enclosed in three striking, angular greenhouses and a $4-million performing arts center designed by the late Louis Kahn. To demonstrate Fort Wayne's cultural awareness, city hall treats telephone callers who are put on hold to Vivaldi.

To make sure the world heard about all the good things happening in Fort Wayne, Moses campaigned to win awards for the city, not out of mere boosterism but to establish its credentials as a good place to live and work. He succeeded. In 1983, for example, President Reagan presented Moses with the National Municipal League's All-America City award for Fort Wayne's innovative response to its problems. The city's first efforts to exploit these attributes and collar new business were hesitant. Moses and his staff investigated and rejected the idea of turning the area into a Midwest Silicon Valley, but not before losing $1 million in an unsecured loan to a microcomputer company in Ohio that went bankrupt before it could move to Indiana. Typically, according to his aides, Moses didn't try to pin the blame on anyone but prodded his people to refine their ideas about what the city could do best.

Fort Wayne's traditional skills are in manufacturing, but Moses did not want low-technology industries. "They were lost to Korea and Mexico," he says. "So we had to concentrate on high-tech, computerized manufacturing." He wanted state-of-the-art plants so efficient that they would be the last to close in a recession. He also wanted plants that could "compete on a global basis," as he puts it, and not lose out to Asian competition within a few years of opening their doors. Indeed, he would welcome an Asian company in Fort Wayne but has had no nibbles yet. He has visited Japan in search of business, and the chamber of commerce has hired a Japanese businessman as a consultant.

The biggest monument to Ft. Wayne's success, the new GM truck plant, is about ten miles southwest of the city limits on Interstate 69. Since the plant means payrolls, suppliers, retails sales, and housing in the city as well as its suburbs, Fort Wayne fought for it as hard as if GM wanted to build within the city. James Falloon, a 46-year-old Canadian who will manage the plant, says location was the decisive factor in the choice. To accomodate just-in-time inventory controls, the plant had to be within 200 to 300 miles—a one-day round trip for a truck—of most suppliers. Fort Wayne met that re-

URLI
AIR EXPRE

The new national hub *for Burlington Air Express keeps the Fort Wayne airport busy at night.*

TOYS
MIDWEST SURPLUS
ELEPHANT EARS
LEMONADE
SHAKE-UP

Retailing rises *in a plant abandoned by International Harvester, once the city's main employer.*

quirement, but so did other cities. The state and the city then piled on the incentives for choosing Fort Wayne.

"The town was so positive about us we were leery," says Falloon. The city agreed to spend $9.5 million on water lines and sewers for the plant and sold $31 million in low-interest bonds to finance pollution controls. Allen County threw in $2.75 million for improvements to local roads. The state paid $20 million to convert the simple interchange on Interstate 69 to a full double clover to handle more traffic, and added $11 million, including $5 million for on-the-job training. The sweeteners totaled $70 million, not counting a ten-year property tax abatement that will save GM an estimated $14 million.

What will the Fort Wayne area get in return for all these taxpayer-supported inducements? The plant will generate $100 million a year of spending in the area by GM employees, who will create new jobs in a kind of "multiplier" effect, and will pay about $3 million a year in state income taxes and $5 million in sales taxes. The imported workers will need new housing, which will swell property tax revenues.

Another important catch settled at Baer Field. When California-based Burlington Northern Air Freight decided last year to establish its own jet fleet it needed a central hub where the planes could meet every night to swap loads. Three serious candidates emerged: Indianapolis, Columbus, and Fort Wayne. Any would have served well, but Moses made the best offer. The city remodeled a large building it owned at the airport and leased it to the company, which has just changed its name to Burlington Air Express. Formerly owned by Burlington Northern Railroad, it is now a subsidiary of Pittston Co. The city, with federal help, is lengthening the runways and has promised further improvements. Residents complain about the noise at night, but the city isn't about to silence a business that is investing $100 million in the area and employing 350 people.

FORT WAYNE has also fought successfully to retain established industries that might have moved. General Electric, a longtime resident, cut its work force from 10,000 in the 1960s to 2,900. Some 550 workers were scheduled to be laid off in 1984 and 1985. However, a GE plant in Cincinnati needed more space for its fast-growing jet engine business. Fort Wayne lured part of this high-tech operation, the manufacture of electronic controls, with a variety of attractions, including tax abatements and helpin retraining workers. Instead of cutting jobs, GE wound up with a net gain of 150.

Other veteran Fort Wayne employers have been expanding. When ITT won a contract to develop the Army's new family of tactical field radios, it had a lot of empty plants around the country it could have used, but Fort Wayne came up with another irresistible proposition. A nonprofit city corporation built a $4-million plant for ITT in a new industrial park and made it available to ITT for a nominal $1,000-a-year rent for five years. ITT has doubled its Fort Wayne employment in three years to 1,300 and plans to double it again in the next three. Says Karl Bandemer, a builder who was the city's director of economic development until recently: "We hit a home run with ITT."

The city's biggest employer, Magnavox, chose to spread out mostly in the Fort Wayne area as its military electronics business grew. Other states offered inducements, says President James R. Loomis, but couldn't match the skilled and willing labor available in Indiana. "The work ethic of the people coming off the farms is absolutely unbelievable," says Loomis. Magnavox employment in the area has grown from 3,000 in 1979 to 7,100 today.

The renewed vitality of manufacturing has given a great boost to local industries, especially housing, which almost came to a stop in the early 1980s. Thomas L. Guthrie, director of the Community Research Institute at the combined Fort Wayne campus of Indiana University-Purdue University, says single-family housing permits will probably total 2,300 this year, compared with the previous high of 2,000 in 1978. "The market is going wild," he says.

Like other developers, Joe Zehr, 45, barely survived the bad years. He took up strip mining in southern Indiana and erected condominiums in Dallas while trying to carry 500 unsold lots in the Fort Wayne area. Business began to pick up as early as 1983, and now Zehr has $35 million of work on the books.

Time will tell whether the benefits of luring industry to Fort Wayne truly match the costs. At first, the city was so far down it had to grab what it could, and hang the expense. "There are too many communities chasing too few industries," says Karl Bandemer. "It's crazy. But it's the game. You have to pay to play." Fort Wayne is playing, paying, and winning. Now that the crisis has eased, says Moses, "we're filling in jobs more selectively, and moving away from giveaways." Fort Wayne can now take a more hard-nosed look at which companies come to town, and how much they will cost. ■

LABOR

AMERICA'S MOST ARROGANT UNION

With six-figure salaries, members of the Air Line Pilots Association don't have much in common with their union brethren and don't mind crossing picket lines.

■ *by Kenneth Labich*

LORD KNOWS, it was fun while it lasted. You were one of the elite, an Air Force or Navy flier who moved up the ranks with top-gun swagger. Then you slid into a cockpit for Delta or American, pulling down a heavy six-figure salary for maybe 80 hours a month in the air. Plenty of time to work on your backhand or your handicap or whatever. Everyone admired you, from wide-eyed kids who tossed salutes as they boarded to equally wide-eyed airline executives who paid you so well and blithely passed the tab to the customers. *Strap in. Sit back. Relax. Captain Right Stuff is taking everyone for a ride.*

Those days are gone. Deregulation changed the rules. Pilots, along with the rest of U.S. airline employees, are confronting combative managers who demand deep wage cuts and work rule concessions. The pilots' principal union, the 40,000-member Air Line Pilots Association (ALPA), is fighting back, as any union might be expected to do. But this is no ordinary union. ALPA has more in common with, say, the American Medical Association than with the Teamsters or United Auto Workers, or even with other airline unions. ALPA members average over $80,000 a year, and a few senior captains rake in more than $200,000. Union President Henry A. Duffy, 52, a Delta captain, is something of a champ. ALPA pays him $225,000 a year, including allowances for personal expenses. His salary is based on the pay of the highest-paid pilot in the union.

Nor do the pilots exactly stand shoulder to shoulder with their brethren in the labor movement. They have outraged other airline unions by crossing picket lines when it suited them, and they have sometimes cut private deals with management at the expense of the machinists and flight attendants. Last summer, in order to protect their own seniority, United's pilots blocked the airline's bid to acquire Frontier. Frontier promptly went bankrupt, and 4,700 employees—including 520 ALPA pilots—lost their jobs. "In the final round we were sacrificed. They were looking out for their own interests," says Lorraine Loflin, chief negotiator for Frontier's flight attendants' union.

GORDON/TRAUB—WAYFARER

Lobbying the White House *is part of the job for Henry A. Duffy, president of the pilots' union.*

ALPA members play rough in other ways. During a month-long strike against United last year, ALPA pilots rented a hotel room near O'Hare Airport in Chicago and trained binoculars on the runways. By recording the serial numbers of the United planes still flying, the union was able to trace the pilots' identities through airport records. Then ALPA members tried to badger them into honoring the walkout. The union, based in Washington, D.C., is girding for more battles. By hiking dues from 1.35% of annual wages to 2.35%, it is building a $100-million war chest to support strikes.

It is hard to see how ALPA can prevail in the long run. "The pilots seem to think that if they stick their heads in the sand, all this bad stuff will go away and things will return to the good old days," says David L. Pringle, United's senior vice president for human resources. Leaving aside the unlikely possibility that Congress will put airlines back under its regulatory thumb, market forces will keep pushing airlines to cut costs. As one Wall Street investment banker familiar with the industry puts it: "If you've got someone fly-

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REPORTER ASSOCIATE *Alan Farnham*

ing a plane for $150,000 a year and another guy doing the same thing for $75,000 a year, the free market has a way of eliminating the $150,000 guy sooner or later."

Such concerns were unthinkable until the early 1980s, when the industry's new economic realities began to appear. In 1982 Frank Lorenzo, 46, the implacably anti-union chairman of Texas Air Corp., acquired Continental Airlines. He filed for bankruptcy, then immediately reopened Continental as a non-union carrier paying lower wages. ALPA called a strike, but hundreds of Continental pilots, including some newly hired ones, crossed the picket lines. Things turned ugly. Someone torched a barn on the property of a nonstriking pilot in Colorado. A bloody elk's head smashed through the front window of another nonstriker's house. Two strikers were arrested when police caught them carrying pipe bombs, disguises, and maps marked with the locations of nonstrikers' homes. One of those arrested had previously taken off his uniform pants and marched through the Houston airport with a sign on his back that said: WORKING FOR LORENZO AT HALF-PRICE IS LIKE BEING HALF-DRESSED. IT'S STUPID.

CONTINENTAL continued to fly, and the ineffective strike sputtered on for more than two years until ALPA finally authorized those pilots who were still striking to apply for their old jobs back at the lower pay scale. It was a crushing defeat, and ALPA's national leaders realized that in Lorenzo they had acquired a formidable foe. "We would rather have peace," says Duffy. "But if you've got somebody that is just hell-bent to destroy you as a union or run you off the property, you're going to have to take him on with every traditional labor practice there is."

Duffy and his pilots were soon tangling with Lorenzo again, and this time they managed to thwart him. In the spring and summer of 1985 the Texas Air chief seemed to be close to winning a spirited battle against several contenders for control of TWA. But ALPA officials at the carrier offered financier Carl Icahn a deal in which they would take a 26% cut in pay and benefits in exchange for a block of stock. Icahn was not exactly known as a friend of labor, but he seemed better to the pilots than Lorenzo. The concessions allowed Icahn to top Lorenzo's offer.

By carefully planning the strike against United, ALPA managed to mostly shut down the giant airline. The union set up centers around the country to provide emergency cash and counseling services for anxious pilots and their families. The 560 or so new pilots United put into training to help break the strike refused to cross picket lines. On the other hand, United showed its power too. Despite losses of $940 million, United stuck to its demand for a two-tier wage system like the one American Airlines had won from its non-ALPA union two years before. Eventually the pilots agreed to United's two-tier system, though in slightly watered-down form.

The ALPA pilots outsmarted themselves during negotiations with Eastern Air Lines earlier this year. Management, burdened by huge debt and buffeted by non-union competitors, had been demanding deep wage cuts. The pilots balked even when they learned that in the absence of wage concessions Eastern might sell out to Frank Lorenzo. Hiring the investment banking firm of Lazard Frères to find another buyer, they continued to hold out until it was too late to block Lorenzo's bid. Eastern's unions made a final effort to find another alternative in early October, but the Transportation Department has given its approval to the deal and it seems likely to go through.

AIRLINE	NEW HIRE	FIRST OFFICER	CAPTAIN
UNITED	**$22,000** For flying 727 on domestic routes	**$81,000** For flying 727 on domestic routes (12 years' seniority)	**$156,000** For flying 747 on Pacific routes (30 years' seniority)
AMERICAN	**$26,000** For flying 727 on domestic routes	**$77,000** For flying 727 on domestic routes (10 years' seniority)	**$143,000** For flying DC-10 on Atlantic routes (25 years' seniority)
TWA	**$22,000** For flying 727 on domestic routes	**$52,500** For flying 727 on domestic routes (12 years' seniority)	**$110,000** For flying 747 on Atlantic routes (20 years' seniority)
PEOPLE EXPRESS	**$12,000** For flying 727 or 747 on all routes	**$36,000** For flying 727 or 747 on all routes (3 years' experience)	**$68,000** For flying 747 on all routes (5 years' experience)
ALPA AVERAGES	**$18,000–$24,000**	**$70,000** (14 years' seniority)	**$104,000** (22 years' seniority)

The Ups and Downs of Airline Pilots' Wages

Pilots at most major carriers get approximately the same pay, but they took a deep cut at TWA to keep out Frank Lorenzo. By comparison, pay scales at non-union People Express are puny.

Some of Eastern's other unions are still fuming over the pilots' intransigence, and their anger seems justified. According to John Simmons, a Massachusetts labor relations expert who monitored the Eastern talks, the unions failed to fend off Lorenzo in large part because ALPA early on refused to join the other groups in a collective effort. "The pilots seem to feel that they're smarter than the managers," says Simmons. "They think they can run the airline better, and this attitude—call it professional arrogance—almost guarantees that they'll be unable to sit down with the other unions. And if you can't cooperate with your brothers, then you've got real trouble."

The pilots have annoyed their colleagues even in some of the recent mergers and takeovers that have proceeded fairly smoothly. One basic sticking point: ALPA negotiators often insist everyone take the same percentage cut when wage concessions are being negotiated. A $150,000-a-year pilot might be pinched some by a 10% or 20% cut. But the $30,000 mechanic or the $18,000 flight attendant could have trouble surviving. "If they're going to be a union, they are going to have to stop being self-centered and support basic labor principles," says William F. Genoese, director of the Teamsters' airline division, which represents some flight attendants, among other airline workers.

Sometimes ALPA locals wind up in conflict with each other. When the crunch came during the United-Frontier negotiations last summer, the ALPA unit at United made it clear that even fellow pilots were not worth saving. If the merger had gone through, some Frontier captains would have displaced United pilots on desirable routes once the two seniority lists were blended. "Our guys saw it from a completely selfish point of view," says David Pringle of United management. "There was nothing in it for them, and so a lot of people are out of work." The ubiquitous Frank Lorenzo subsequently agreed to acquire Frontier and its parent, People Express, and many of the laid-off employees may eventually be absorbed into his expanding empire. But most of Frontier's employees have been grounded since the carrier ceased operations at the end of August.

Duffy is aware that ALPA has an image problem with other unions and, to some extent, with the public at large. Occasionally it supports pro-labor legislation on Capitol Hill. "Some of the things we testify about are directly related to our business," says Duffy. "But some have to do with good old-fashioned unionism." ALPA also backed off from trying to organize the air controllers when other unions within the AFL-CIO claimed prior jurisdiction. The pilots did not support the illegal, ill-fated controllers' strike of 1980. But ALPA's national leadership now backs the rehiring of some former controllers, charging that the air control system is dangerously understaffed.

New York Air
Pan Am
WHERE'S THE SAFETY?
PROFITS FIRST SAFETY LAST
WOULD I LIE TO YOU

Striking pilots *at Continental held out for nearly two years before accepting lower pay.*

The union tries to win public approval by stressing its air safety research. ALPA has sophisticated testing equipment in a sleek office building near Dulles Airport in Virginia. But even its safety work sometimes smacks of self-interest. The union often uses its laboratory to challenge allegations of pilot error when an accident takes place. ALPA technicians worked ten years on one case involving a Piedmont pilot accused of damaging his aircraft during a landing. By enhancing tapes made by voice recorders in the cockpit, the union was eventually able to prove that the pilot had followed proper procedures.

When ALPA officers speak out on safety issues, they often seem to be simply criticizing management. Duffy thinks air safety has been compromised because of the economic pressures brought on by deregulation. He ticks off some of the recent moves he says airlines have made to cut costs: eliminating walk-around inspections by mechanics before each flight, calling for reduced amounts of reserve fuel on some flights, removing life rafts to lighten the aircraft and save fuel.

While Duffy is correct about these changes, the Federal Aviation Administration and the airlines argue persuasively that safety has not been compromised by any of them. A spokesman for American Airlines points out that pilots continue to make the preflight walk-around. Fred Farrar, a spokesman for the FAA, says the government enforces generous reserve fuel standards. As for life rafts, 14 carriers have sought and received permission to take them off aircraft over the years. But the FAA insists it grants waivers only on over-water routes that are close enough to shore to enable a disabled plane to reach land, such as the New York to Miami run along the East Coast.

ALPA's safety research is now matched by economic research. ALPA has a team of staff economists who carefully chart traffic flow and financial changes at each of the major airlines. The idea is to be prepared with independent financial analyses when the union representatives sit down with management to negotiate new contracts. The union also has a team of lawyers and negotiators who work with local units around the country and provide backup support at contract talks or during grievance proceedings.

Seth Rosen, the chief of ALPA's negotiating team, argues that the consolidation the industry is now going through will help pilots regain their old power. When airlines become huge, he says, they have trouble operating during a strike, as the United case proved. He even thinks it would be possible to call a nationwide strike, with pilots at several airlines going out at once. But surely his view is too rosy. Could the fractious locals ever get together? And as consolidation picks up speed, Frank Lorenzo is bound to wind up as one of the industry's biggest players. He most likely will soon be running the largest airline operation in the U.S., with about 20% of the traffic. He will no doubt squeeze down his costs, sometimes at the expense of his employees' wage scales. He could, for example, limit the damage of a strike against Eastern by picking up some of the traffic on his non-union lines. Lorenzo in turn will put added pressure on his big competitors to bring down their costs as well.

FOR MANY PILOTS, new stress about their future has brought on some profound personal changes. As a group, airline pilots have traditionally been a highly conservative bunch with Establishment values. Mostly prosperous former military officers, they have by and large supported Ronald Reagan and the Republican party. But now, bloodied in their struggles against airline management, many of them have turned against the current Administration because of what they perceive as antilabor bias. Some of the same pilots who once basked in the glow of an indulgent management have become firebrands. "We've got people out there who want to shut down the whole world," says Duffy.

That attitude will only heighten the labor-management tensions in the airline business today. Nor will the ALPA militants impress their colleagues in other unions, most of whom still wonder whether they will ever share a common view with a group that has had such a merry time of it for so long. A consultant to other airline unions likes to tell of an acquaintance, an Eastern Air Lines captain, who recently retired in disgust at the age of 52. The job isn't what it used to be, the intrepid pilot pronounced. He used to go out with movie stars, and now he has been reduced to dating flight attendants. ■

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At 31, Kansas-born David Wittig makes some $500,000 a year at Kidder Peabody.

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Philip-Lorca diCorcia photographed David C. Wittig at Kidder Peabody's offices in New York. The 31-year-old mergers and acquisitions vice president enjoys the fruits of Wall Street's boom. But today's new graduates may never. See page 28.

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POLITICS & POLICY

REAGAN'S IMPRINT ON THE COURTS

Critics worry that the President is packing the courts with poorly qualified ideologues. He is not. His judicial legacy is likely to be made by a small group of exceptional legal scholars who are infusing the courts with free-market principles.

■ *by Robert E. Norton*

BY THE TIME Ronald Reagan heads back to the ranch for good, he will have appointed about half the judges on the federal district and appeals courts. Will this judicial legacy transform America as many liberals worry?

Based on the decisions of the judges he has already appointed, almost certainly not. Reagan's judges are generally conservative in their outlook, but the implications for business and society are far from clear. They are more inclined than their predecessors to be harsh with criminals and to favor business over labor or consumer groups. But they are deferential to the other branches of government, hesitant to question the decisions of regulatory agencies or to broadly interpret laws enacted by Congress or state legislatures.

The lower courts play a large role in society. District judges handle more than 300,000 federal lawsuits a year, of which only about 35,000 are carried to the courts of appeal. The Supreme Court reviews fewer than 150.

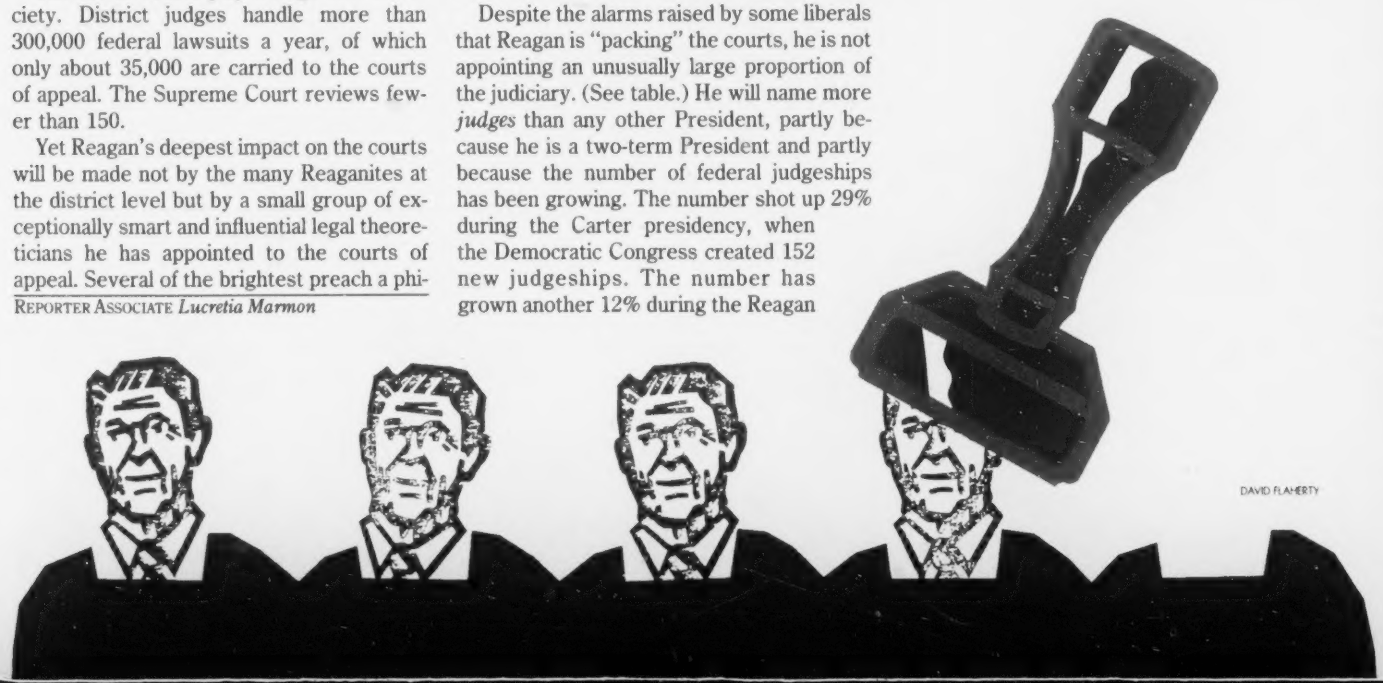
Yet Reagan's deepest impact on the courts will be made not by the many Reaganites at the district level but by a small group of exceptionally smart and influential legal theoreticians he has appointed to the courts of appeal. Several of the brightest preach a philosophy born in the 1950s at the University of Chicago Law School called "law and economics." Free markets usually allocate resources most efficiently, say the Chicago schoolers, and the law should aim to help the markets work. Law and economics is now a dominant intellectual current in U.S. law schools. By putting its proponents on the bench, Reagan is pushing the theory out of the textbooks and into the mainstream of American law.

The Reaganization of the courts will stop well short of revolution if no further opportunities arise for tilting the Supreme Court in a more conservative direction. Two or more additional Reagan appointees might produce significant changes in the constitutional interpretation of social questions such as free speech, abortion, and school prayer, as well as business issues such as affirmative action.

Despite the alarms raised by some liberals that Reagan is "packing" the courts, he is not appointing an unusually large proportion of the judiciary. (See table.) He will name more *judges* than any other President, partly because he is a two-term President and partly because the number of federal judgeships has been growing. The number shot up 29% during the Carter presidency, when the Democratic Congress created 152 new judgeships. The number has grown another 12% during the Reagan Administration. The federal bench now includes 576 district judges and 168 appellate judges. The Reagan judges, on average, are not much younger than those named by other recent Presidents.

One thing new about Reagan's judges is the care with which they are being selected. Traditionally, a President solicited suggestions from the American Bar Association but gave greatest weight to recommendations from Senators of his own political party. The Senators favored loyal party members but did not dig much into legal or social philosophies. The Reagan Administration has taken firm control of the process, diminishing the role of the Senate and the ABA. The Justice Department uses an exhaustive screening process to evaluate how potential judges will perform. Justice staff members interview

REPORTER ASSOCIATE *Lucretia Marmon*



KATHERINE LAMBERT

Free-market crusader *Robert Bork was Reagan's first appointee to Washington's powerful court of appeals.*

several candidates for each opening, usually in lengthy sessions. They pore over anything the would-be judge has written and quiz colleagues, local politicians, and judges on the candidate's suitability. After this winnowing, they send recommendations to a White House committee that includes Attorney General Edwin Meese and Chief of Staff Donald Regan. This committee makes final recommendations to the President, who usually okays them.

Meese and his aides say they are uninterested in the political ideas of a candidate; they just want to know how he sees his role as a judge. What's important? As Meese tells it, commitment to "judicial restraint" ranks first. The Reagan Administration wants judges who think the courts should play a limited role in society. Such judges should aim to apply the law rather than amplify or interpret it broadly. They should also share the Administration's commitment to "original intent": Judges, as they read the Constitution or the statutes, should be guided by what the drafters had in mind.

Sheldon Goldman, a political scientist at the University of Massachusetts at Amherst, thinks that all the talk about restraint and original intent is part of the Reagan political agenda: "Not since the Roosevelt Administration have we seen such a systematic attempt to place on the bench people whose judicial philosophy and political views are compatible with those of the Administration." Laurence H. Tribe of Harvard Law School calls the selection process "an ideological test so fine and narrow that it is excluding quality."

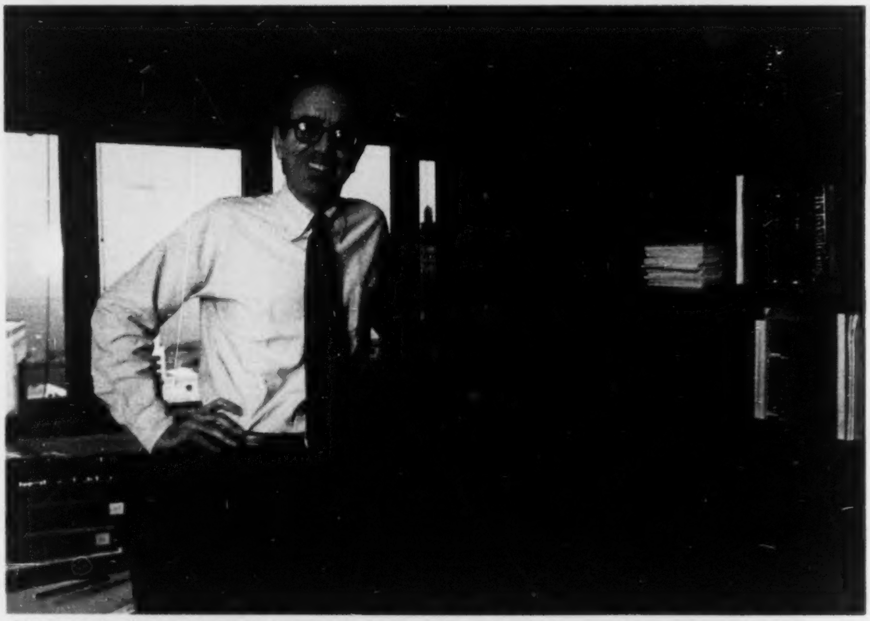
Some of Reagan's appointments give credence to the complaint, such as that of Daniel A. Manion to a seat on the court of appeals for the seventh circuit in Chicago. Staunchly conservative, son of a founder of the John Birch Society, Manion has had an undistinguished legal career. But there is no evidence of a wholesale slide in professional qualifications under Reagan. In the ABA evaluations, his appointees have done about as well as Carter's.

To see how Reagan's judges differ from their peers, Jon Gottschall, a political science professor at the State University of New York at Plattsburgh, compared decisions in the appeals courts during 1983 and 1984. Appellate judges sit in panels of three and reach a unanimous decision in most cases. Carter and Reagan appointees agreed three-quarters of the time. But in cases where they split, the differences were dramatic. In civil liberties cases such as those involving race and sex discrimination or the rights of suspects to due process, the Reagan judges were likely to opt for the "liberal" outcome—favoring the plaintiff—in only 26% of the cases, vs. 63% for Carter judges. In economic cases such as labor disputes and personal injury suits, the liberal score was 33% for the Reaganites, 69% for Carter's judges.

Reagan's hope that his judges will be practitioners of judicial restraint is being fulfilled. The most careful assessment of the Reagan judiciary on this score is a case-by-case review done by the Center for Judicial Studies, a conservative think tank. The center found that half the Reagan judges exercised restraint in all their significant cases, and another quarter in nearly all of them. The remaining quarter tended to interpret the law broadly and exercised restraint less than half the time.

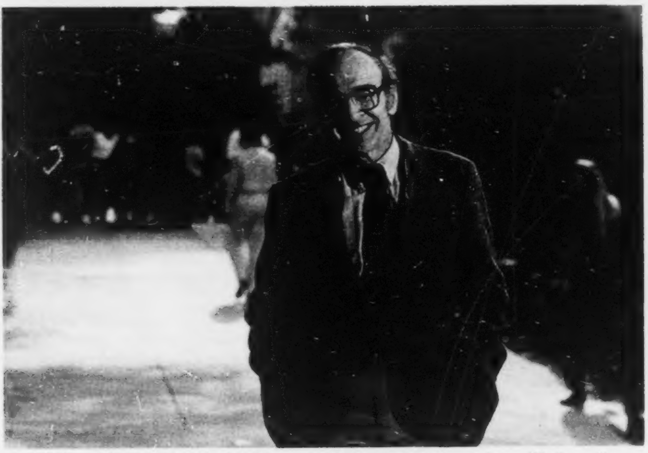
THE CONCEPT of judicial restraint has mixed implications for business. Applying it, Reagan's judges tend to limit access to the courts by questioning whether plaintiffs are entitled to sue. A private party who wants the government to enforce, say, a regulation of the Environmental Protection Agency against a company may be thrown out of court if the applicable law fails to specify that private citizens can initiate such actions. On the other hand, Reagan's judges are unwilling to second-guess the decisions of government agencies as long as their statutory authority is clear. In the current deregulatory climate this reticence should be beneficial to business, but it can cut both ways. Since many regulatory lawsuits have companies arguing both sides of a case, whether or not you like the result depends on which side you are on.

Some of these regulatory decisions will


MICHAEL L. ABRAMSON

Chicago judge *Richard A. Posner wrote a popular textbook on economics for law students.*

KATHERINE LAMBERT



Criticism from the left: *Herman Schwartz of American University worries that Reagan's judges will overturn precedents in civil rights cases.*

RICHARD HOWARD

And the libertarian right: *Stephen Macedo of Harvard says adherence to judicial restraint means favoring government over business.*

come under close scrutiny at the appellate level. There, a small number of brilliant Reagan judges, many in their 30s and early 40s, are carrying the law and economics crusade into the courts. Their force has been felt most fully on the court of appeals for the District of Columbia circuit. It decides most cases involving government agencies and is often called the second most important court in the country. Reagan has appointed six of the 11 sitting judges and has one vacancy to fill.

Robert H. Bork was Reagan's first appointee to this court. At 59, Bork is an elder statesman of the law and economics movement. He studied at the University of Chicago Law School in the 1950s. His teachers included Aaron Director, a key thinker in law and economics (and a brother-in-law of free-market guru Milton Friedman). Bork holds that the sole function of antitrust law should be to promote consumer welfare. In the 1960s and 1970s, while teaching at Yale Law School, he wrote widely and critically (sometimes in FORTUNE) questioning the popular notion that all mergers should be looked upon with great suspicion. In 1978 he wrote a book setting forth his views. Now he is implementing them. In a recent suit, eight local moving companies accused Atlas Van Lines, a nationwide mover, of illegally barring them from competing for interstate business. Bork sweepingly reviewed 90 years of Supreme Court precedent in finding Atlas's conduct efficient rather than illegal. Says a corporate attorney: "He just took a few of the themes from his book and wrote them into law."

Reagan's most recent appointee to the D.C. court is Douglas H. Ginsburg, 40, a graduate of the University of Chicago Law School who headed the antitrust division of the Justice Department and taught at Harvard before joining the Reagan Administration in 1983. Stephen F. Williams, 50, a former professor at the University of Colorado School of Law recently appointed to the court, is also identified with law and economics.

Corporate lawyers hail the D.C. court's new look. Michael Boudin, a partner with Covington & Burling who has argued cases for AT&T and the railroad industry, compares the intellectual firepower of the D.C. appeals court to that of famous courts of the past, such as the second circuit court of appeals during the 1930s and 1940s, the tenure of legendary Judge Learned Hand. "When you're dealing with such smart people, you can live with the decisions that go against you, because they are the kind of decisions you should have figured out would go against you anyway," says Boudin. The court was once considered both liberal and unpredictable. Says Stephen Bokat, general counsel for the U.S. Chamber of Commerce: "Six or seven years ago, if there was any way of avoiding litigating a business case there, we would find it. That's not the case now."

	JUDGES APPOINTED TO THE FEDERAL BENCH*	
PRESIDENT	**TOTAL** PERCENT	**AVERAGE AGE AT APPOINTMENT**
Reagan	**288** 39.4%	**49.3**
Carter	**258** 39.8%	**50.2**
Ford	**64** 12.9%	**49.7**
Nixon	**224** 45.0%	**50.0**
Johnson	**162** 36.9%	**51.6**

*District courts and courts of appeal

Presidential Picks

Reagan already has appointed the most judges—but the number of judgeships has grown. His judges are not much younger than average.

THE HOTBED of law and economics, suitably enough, is Chicago, seat of the court of appeals for the seventh circuit. Here, Reagan's first appointee was Richard A. Posner, 47, a former professor at the University of Chicago Law School, the most influential figure in the law and economics movement, and author of its first and most widely used textbook. Posner types his own decisions on a word processor and writes some 100 a year—more than twice the average output of his peers. Posner warns that judges of his ilk are not necessarily pro-business: "I can imagine the appointment of these judges having made the courts a little more knowledgeable in business, maybe a little more sympathetic—but only where business interests coincide with the interests of the free market."

Last year Posner was joined on the bench by Frank H. Easterbrook, 38, a former colleague at the University of Chicago Law School. If Posner is the archpriest of law and economics, Easterbrook is the Young Turk. Brilliant and brash, Easterbrook has been known to bang out an opinion in two hours, and brag about it. Together the two ex-professors are creating intellectual ripples throughout the legal system. Their opinions are read widely by other judges and lawyers.

In a recent securities case, Posner struck down an Indiana anti-takeover statute that CTS Corp., an Elkhart, Indiana, maker of electrical components, had used in trying to fend off a takeover by Dynamics Corp. of America, a Connecticut-based manufacturer. The statute denied voting rights to a would-be acquirer that had bought 20% or more of an Indiana company's stock unless a majority of other shareholders agreed to extend them. The law, Posner wrote, was designed to impede "the important market for corporate control . . . an interstate, indeed international market that the State of Indiana is not authorized to opt out of." Securities lawyers around the country were even more interested in the three pages of the 28-page opinion that Posner devoted to a withering critique of a poison pill provision CTS had adopted. He suggested that nearly all such devices are illegal. Dynamics is back in court challenging a new attempt to block the takeover.

Though the Reagan Administration has appointed seven of the 11 judges sitting on the seventh circuit court (again there is a vacancy), only Posner and Easterbrook are law and economics devotees. Other judges sometimes find their arguments persuasive. Jokes Richard D. Cudahy, a Carter appointee who concurred with Posner in the Dynamics case: "We're sort of the branch campus of the University of Chicago."

OVERALL, this injection of free-market thinking should be a plus for the business community. "Taking a look at court decisions from the standpoint of the economy, and how the total population is best served, is a very healthy thing," says Philip M. Knox Jr., general counsel of Sears Roebuck & Co. Other lawyers think the intrusion of economic commentary serves only to confuse legal issues in a case.

When Posner, Bork, and other Chicago school judges use economic theory in their opinions, they are often accused of abandoning the doctrine of judicial restraint. This is a seeming inconsistency, since they are among the theory's most articulate proponents. But in defining restraint, they draw a critical distinction: A judge should be deferential to the executive and legislative branches of government, but is less bound by precedents established by the courts, other than those of his own court or the Supreme Court.

This distinction becomes especially important in the context of constitutional law. Both Bork and Posner have been mentioned as potential Supreme Court appointees, and anyone else Reagan might pick would surely be an advocate of judicial restraint. So far Reagan has promoted William Rehnquist, a Nixon appointee and adherent to the philosophy, to Chief Justice and named only two new justices: Sandra Day O'Connor and Antonin Scalia, a former professor of the University of Chicago Law School. Both also espouse restraint. Any further Reagan additions to the Court, says Herman Schwartz, a professor of law at American University, could create a conservative majority that would cite the "original intention" of the Constitution to overrule years of precedents that have advanced the definition of civil liberties. He

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says, "What these people really want to do is to take the Supreme Court out of the business of protecting individual rights."

A First Amendment issue with implications for the publishing industry is freedom of speech. The original intent of the drafters of the Constitution, Reagan's judges might argue, was to protect political expression. Floyd Abrams, a partner in the New York firm of Cahill Gordon & Reindel, worries that two or more additional Reagan Supreme Court appointments could produce "a major turnabout in the First Amendment protections we have historically had in this country." He is concerned that it might become easier for individuals or the government to quash a story before publication, or for the courts to assess enormous damages against the press in libel actions.

The Supreme Court has already eroded the protection of commercial speech, which covers such businesses as advertising and credit reporting. The Court, with Rehnquist writing the majority opinion, ruled five to four that Puerto Rico could prohibit truthful advertising by casinos in order to discourage gambling by local residents. The dissenting justices saw the law as an unconstitutional infringement of First Amendment rights.

One oft-stated goal of the Administration is to outlaw affirmative action plans, especially those of state and local governments, on the grounds that the original intent of the 14th Amendment to the Constitution prohibits any discrimination, even that designed to reverse past discrimination. The Supreme Court has not agreed with this interpretation so far. But if a majority of justices were to rule against such state and local programs, corporate affirmative action policies would be attacked as well.

SOME CONSERVATIVE libertarians are also troubled by the prospect of a Reagan Supreme Court. Up until the mid-1930s the court tended to be "activist" in protecting industry from government regulation, routinely knocking down statutes that limited employees' wages and hours and declaring New Deal regulatory legislation unconstitutional. Then it flip-flopped, becoming activist in expanding individual rights but allowing government an essentially free hand in regulation. Harvard political scientist Stephen Macedo thinks Reagan's judges would use the doctrine of restraint to turn back the clock on civil rights activism and to continue the hands-off policy toward economic rights that has existed since the New Deal. He gives an example: If a local government rezoned industrial land owned by a company without paying compensation as the Constitution suggests it should, judges following judicial restraint would be unlikely to intervene. Says Macedo, "Reagan judges would further corrode the protection of economic liberties."

Even if Reagan succeeds in recasting the Supreme Court as dramatically as he has the lower courts, the worst nightmares of his critics may not come true. Landmark cases like *Brown* v. *Board of Education*, the 1954 decision that banned school segregation, pose questions that can be answered only deep in a judge's soul. Like racehorses, the most carefully picked judges don't always run according to form. **F**

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U.S. TAX CUTS NOW GO GLOBAL

With America becoming a seductive tax haven, other industrialized countries are chopping rates to keep their big money and their best brains at home.

■ *by Richard I. Kirkland Jr.*

THE GLOBAL ECONOMY is about to catch a serious case of tax-cut fever, courtesy of Congress and Ronald Reagan. Under its new tax law, the U.S. will have the lowest rates of any major industrialized nation. Beginning next year, the top corporate rate will fall from 46% to 34%. The individual rate for the biggest earners will drop in stages from 50% to 28%. Unless America's trading partners respond with their own cuts, they will face a double-barreled challenge. They risk encouraging flight to America of highly paid scientific and business talent as well as corporate capital. Says Sanford Goldberg, a partner with the New York tax law firm of Roberts & Holland: "With the U.S becoming a semi–tax haven, I'd be deeply troubled if I were a foreign finance minister."

The threat of an accelerated brain drain is greatest for high-tax countries whose first language is English, such as Canada, Britain, and Australia. The Australian tax men, for example, collect 60% of everything earned above $35,000 in Australian dollars (equivalent to $22,400 in U.S. dollars). "A young man just starting out here might not move to Hong Kong in search of lower tax rates, but he might well go to the U.S.," says former Australian Prime Minister Malcolm Fraser. He figures that "a small country like ours would only have to lose 100, at the most 200, of its brightest and most inventive people each year to find itself drained of wealth for the future."

Britain—where people earning only $28,000 have to pay a marginal rate of 40%, and where the bottom rate of 29% will soon be higher than America's top rate—has already seen bright scientists and entrepreneurs flock to Silicon Valley. Prime Minister Margaret Thatcher recently expressed anxiety that the U.S. would now attract still more of Britain's most productive people.

Non-English-speaking countries may feel the effects too. "Young Germans are increasingly becoming more mobile and more internationally oriented," says Norbert Walter, a University of Kiel economist. "We will see a brain drain to the U.S. if nothing happens on taxes here."

On the corporate side, high-tax countries are likely to find their tax bases shrinking. The arcana of accounting rules and internal pricing techniques give multinational companies enormous discretion over where in the world they declare earnings. With U.S. rates substantially lower than those abroad, American multinationals will be rushing to shift taxable profits from, say, Lyon to Louisville.

Some governments have already moved to neutralize the pending U.S. tax cuts. Fighting its worst recession in two decades and with an eye on the U.S. reforms, Singapore last spring chopped its corporate tax rate from 40% to 33%. In Europe the initial effect of America's lead has been to stiffen the resolve of politicians who have made or proposed modest tax cuts.

Since taking office last March, the conservative coalition led by Premier Jacques Chirac has lowered France's corporate rate

An Unequal Burden

When the new tax law takes full effect at the start of 1988, the U.S. will have the lowest personal tax rates in the industrialized world.

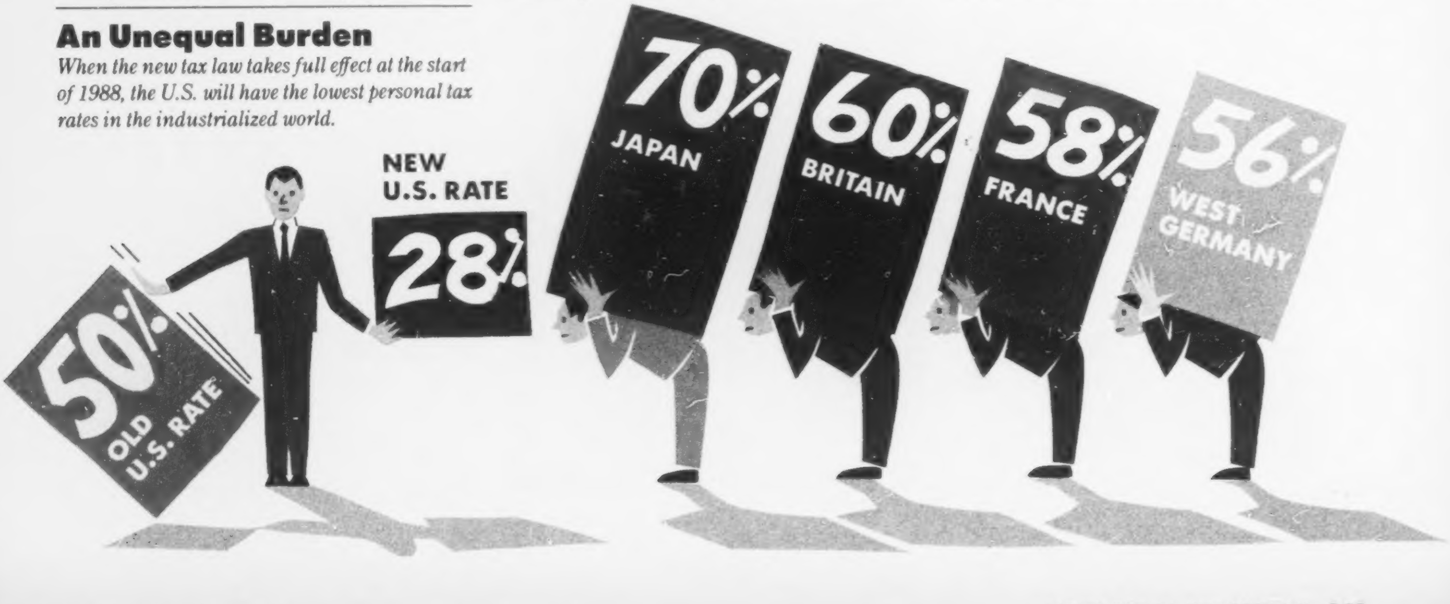

ILLUSTRATION BY JOHN PIRMAN

from 50% to 45% and the top individual rate from 65% to 58%. In early September Chirac's finance minister, Edouard Balladur, reaffirmed the government's commitment to trim the top personal rate to 50% in three or four years. Balladur also set up a special government council to develop proposals by next spring for more radical tax reform.

Major tax reform is also likely in West Germany if Chancellor Helmut Kohl's conservative coalition wins a second four-year term next January as expected. Earlier this year Kohl pushed through a $5-billion tax cut for 1986 and another $5 billion for 1988, but he did it by rejiggering brackets, not by lowering West Germany's top marginal rate of 56% for individuals. Kohl and his colleagues are keeping quiet about further tax cuts until after the election. But many German economists believe that the relatively buoyant economy has room for deeper cuts. They think U.S. reductions will pressure the Kohl government to cut the top business and personal rate to 50% or less by 1990.

IN BRITAIN, Margaret Thatcher, who must call an election before July 1988, is likely to devote any spare change in next year's budget to knocking a few more percentage points off the 29% rate. That would still leave Britain's highfliers facing a 60% rate on income above $58,000, but the Iron Lady's devotion to reducing the lowest rate is smart politics because 95% of British taxpayers are in that bracket. If she wins reelection, though, Thatcher almost certainly would try to push the top rate down toward 50%. It was she, after all, who started the tax-cut bandwagon in 1979 when she slashed Britain's punishing 83% top rate to the current level.

Canada is racing to put together a new tax policy in response to the U.S. Up to now, the Ottawa government has been preoccupied with reducing the budget deficit. For the past two years it has imposed surcharges on personal and corporate taxes. To raise more revenue, the Finance Ministry has been considering a so-called business transfer tax, a version of Europe's widely used value-added tax. Since the U.S. law was passed, Canadian tax planners are thinking of using at least some of the money from a transfer tax to pay for sharp, but so far unspecified, cuts in the top Canadian rates of 50% on corporations and 55% on individuals. Says Peter Daniel, an assistant deputy minister of finance: "There's no question we're concerned about companies and individuals moving to the U.S. We're going to do what we have to do to remain competitive."

Margaret Thatcher's devotion to reducing the lowest rate is smart politics because 95% of British taxpayers are in that tax bracket.

Probably the country least threatened by America's new tax regime is Japan. Its marginal tax rate on individuals climbs as high as 70%, but that applies only to income above $500,000. And though Japan's effective corporate tax rate—the percentage of earnings companies actually pay out—is an extremely high 53%, low interest rates compensate by holding down the cost of new capital.

Even so, Japan is about to embark on the most sweeping tax reform since World War II. In late October a special advisory council presented the product of two years of deliberations. Major recommendations: Lower the maximum personal rate to 50% and the effective corporate rate to a bit below 50%. The cuts would be offset by some new indirect tax, such as a value-added tax, and by taxing savings. Prime Minister Yasuhiro Nakasone is expected to submit the propoals to the legislature early next year.

As a result of this festival of reform, individuals in almost all of the world's major economies within a few years are likely to face marginal rates no higher than 50%. A decade ago, when top rates typically soared between 70% and 80%, such a prospect would have seemed politically impossible, if not fiscally irresponsible.

XAVIER LAMBOURS—VU

In France, *new Finance Minister Edouard Balladur is cutting to keep up with U.S. taxes.*

But the economic case for cutting grows ever harder to refute. In a recent groundbreaking study for the National Bureau of Economic Research, Lawrence Lindsey, a Harvard professor, fed data from 1979 U.S. tax returns into an econometric model of the U.S. economy; it calculated the amount of tax the government could have expected to collect had there been no 1981 tax cuts. Among people with taxable incomes above $200,000, Lindsey contends that by lowering rates the government in 1984 collected $8 billion *more* in revenue than it would have if taxes had remained at 1979 levels.

THAT'S THE OUTCOME expected by Reagan's early supply-siders, especially economist Arthur Laffer, who created the much-laughed-at Laffer curve. It presumes an upswing of tax collections because lower rates would induce taxpayers to work harder. Though Lindsey is no doctrinaire supply-sider, he believes that "there is some kind of Laffer curve." But he estimates no more than a third of the extra revenue came from that source. "To get the kind of increases in earnings I observed," he says, "a professional working 50 hours a week would suddenly have to start working 94 hours." He figures most of the new tax money came from business owners and the self-employed who responded to lower taxes by cutting costs to maximize earnings. As a result of his research, Lindsey now concludes that the highest rate at which governments are likely to maximize the tax take is around 40%.

As yet, no politician in Europe has dared even hypothesize a top individual rate as low as 40%. But the same was true in the 1970s; a 50% rate seemed impossibly low. These days fiscal rectitude, job creation, and risk taking, rather than the old dream of income redistribution, dominate the economic debate in nearly every country. Even some developing countries are catching the entrepreneurial spirit. If in a few years America's bold experiment in tax-base broadening and rate cutting proves successful at boosting employment, entrepreneurship, and government income, then Europe and the rest of the world will have no choice but to try some deep cuts too. ■

REPORTER ASSOCIATE *Philip Mattera*

NOTE

ONLY THE FOLLOWING PAGES OF THIS

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■ BOESKY AND THE DECLINE OF ETHICS • PRODUCTS OF THE YEAR ■

FORTUNE

DECEMBER 8, 1986 $3.50

REAL ESTATE TEN

[illegible]

How to profit from today's new market as

Homeowner
Manager
Investor

High roller Donald Trump says he'll make a killing despite tax reform.

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DECEMBER 8, 1986

VOL. 114, NO. 13

FORTUNE

Technology

Michele Singer photographed New York's 40-year-old Donald Trump at the new Trump Parc condominium overlooking Central Park. Trump and other real estate barons are finding silver linings in the new tax law. See page 27.

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LETTERS

Philanthropy on Your Own Time

Re "The Joys of Closeup Philanthropy" (On Your Own Time, September 1): Having spent some time in Mali in 1984 evaluating gold deposits for Anaconda, I can relate to the concern for the hardworking and water-poor people of that nation expressed by the two Bear Stearns executive vice presidents mentioned in the article. It was obvious during our travels across Mali that for a relatively small investment wells could be drilled and people fed. It is good to know that Americans recognize this need and are taking action to meet it.

There is a perception that some members of the business community are entirely engrossed with "making a bunch" and with their own personal enjoyment. I was pleased with your description of these unselfish activities in behalf of others.

G. ARTHUR BARBER
Dosecc Inc.
Washington

Corrections

"Your Coming State Tax Hike" (October 13) misstated the basis for the tax calculations Arthur Andersen & Co. did for FORTUNE. *The tax rates shown in the table assumed the states that have previously updated their laws to reflect changes in the federal tax code would do so again.*

An item in the October 27 Companies to Watch column on Carrington Laboratories referred to the author of an internal memorandum as a Bear Stearns security analyst. The memo was written by a registered representative. Bear Stearns says the memo does not represent the views of the firm. F

Address letters to FORTUNE, Time & Life Building, Rockefeller Center, New York, N.Y. 10020. Letters may be edited for purposes of clarity or space.

INVESTOR'S SNAPSHOTS

EXPLANATORY NOTES

SALES in the Investor's Snapshots elsewhere in the magazine exclude excise taxes. Instead of sales, assets are shown for commercial banking companies, diversified financial companies, life insurance companies, and utilities, and operating revenues for transportation companies.

NET PROFIT includes any extraordinary items. Where applicable, sales and net profit for past quarters are restated to reflect mergers, acquisitions, or divestitures.

RETURN ON COMMON STOCKHOLDERS' EQUITY is calculated for the latest four quarters after subtracting dividends paid on preferred stock from net income. The five-year average is based on the last five full fiscal years.

PRICE/EARNINGS MULTIPLE is based on earnings per share for the latest four quarters.

TOTAL RETURN TO INVESTORS includes stock price changes and assumes dividends are reinvested on the date paid.

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PROTECTIONISM IN DISGUISE

Democrats will use their dominance in Congress to pass crowd-pleasing, "pro-competitive" laws that are little more than old-fashioned trade barriers.

■ *by Ann Reilly Dowd*

THE STUNNING Democratic takeover of the U.S. Senate catapults trade to the top of the 100th Congress's economic policy agenda. Senator Robert C. Byrd, who seemed likely to resume his old post as majority leader, and Senator Lloyd M. Bentsen, the next Finance Committee chairman, have both promised to pass trade legislation in 1987, setting the stage for a firecracker confrontation between President Reagan and the new Congress. Declares Democratic Congressman Richard Gephardt of Missouri, a presidential hopeful: "The Administration feels there is no role for government in improving the nation's international competitiveness. Democrats feel government's role is essential."

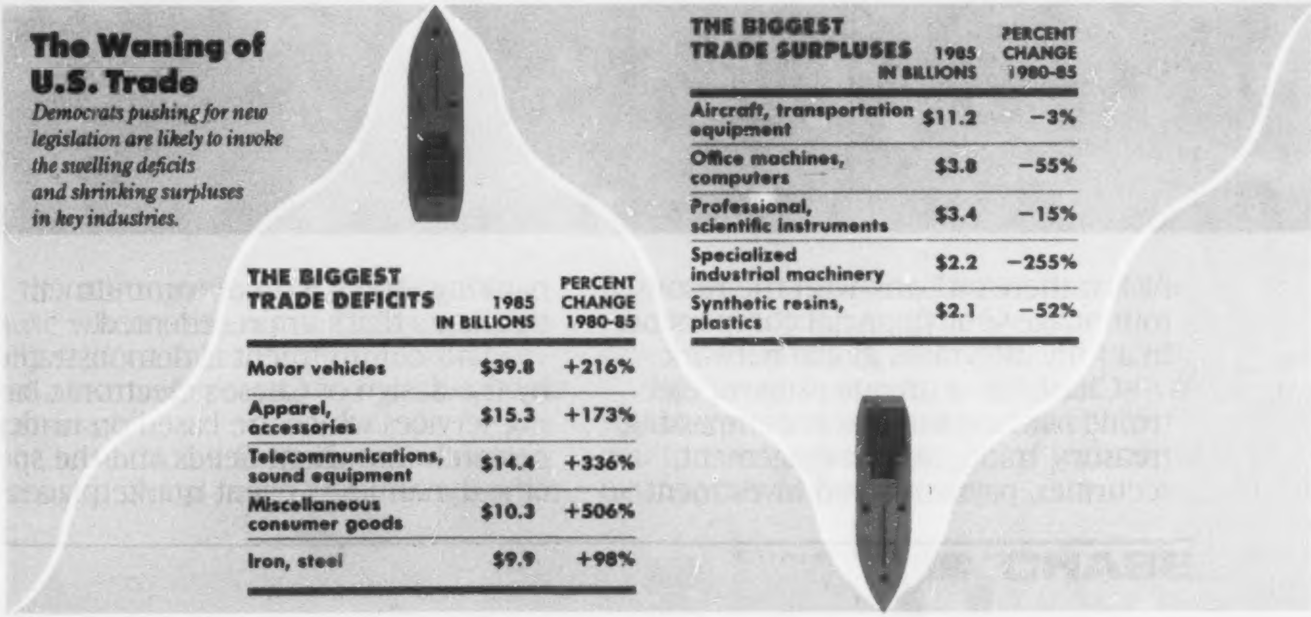
The Administration's top trade priority next year will be to pry open foreign markets through a new round of talks under the General Agreement on Tariffs and Trade (GATT). Reagan has also appointed a Cabinet-level task force to explore ways to boost America's competitiveness. But Administration spokesmen warn against overestimating what Washington can or should do. Instead, they have begun pointing fingers at big business, which Deputy Treasury Secretary Richard Darman recently called "bloated, risk-averse, inefficient, and unimaginative."

In stark contrast, the Democrats are bent on using government to right the trade imbalance. At the top of their agenda is legislation that would push the President to close U.S. markets to countries that dump or subsidize imports or that maintain unfair barriers to American exports. The Democrats also aim to bolster competitiveness by spending more on education, retraining programs, and research and development.

Spurring Congress to action is America's enormous and persistent trade deficit—about $170 billion this year. Although the dollar's drop contributed to a $5.4-billion decline in imports from July to September, even optimists say the deficit will not go below $135 billion next year, or much below $100 billion before 1990. Deficits have spread beyond the nation's rust belt industries to agriculture and telecommunications equipment, long among America's most robust exporters. Today's big exporters—industries such as aircraft and plastics—have seen their surpluses erode. (See chart.)

This dismal reality has splintered the traditional alliance of agriculture and big business that made up Washington's free-trade bloc. Pummeled by a worldwide glut of agricultural products, many U.S. farmers are calling for greater subsidies and more federal help in attacking foreign markets. Others are demanding outright protection. The produc-

REPORTER ASSOCIATE *Lucretia Marmon*



The Waning of U.S. Trade

Democrats pushing for new legislation are likely to invoke the swelling deficits and shrinking surpluses in key industries.

THE BIGGEST TRADE SURPLUSES	1985 IN BILLIONS	PERCENT CHANGE 1980-85
Aircraft, transportation equipment	$11.2	−3%
Office machines, computers	$3.8	−55%
Professional, scientific instruments	$3.4	−15%
Specialized industrial machinery	$2.2	−255%
Synthetic resins, plastics	$2.1	−52%

THE BIGGEST TRADE DEFICITS	1985 IN BILLIONS	PERCENT CHANGE 1980-85
Motor vehicles	$39.8	+216%
Apparel, accessories	$15.3	+173%
Telecommunications, sound equipment	$14.4	+336%
Miscellaneous consumer goods	$10.3	+506%
Iron, steel	$9.9	+98%

ILLUSTRATION BY ANDERS WENNGREN

ers of ethanol, a corn-based fuel, won a 60-cent-per-gallon duty on a competing, imported fuel blend last year. Big business too is flirting with protectionism. Chevron Corp., the third-largest U.S. petroleum company, recently called for a government-supported minimum price for oil. Says Calman J. Cohen, vice president of the Emergency Committee for American Trade, which represents many U.S. multinationals: "In the past American business had so many opportunities that it didn't turn to government for help. Now it can't afford not to."

Democrats see the trade issue as a winner. It lets them appeal to a broad spectrum of business and labor leaders who are impatient with what they consider the Administration's lack of aggressiveness on trade. Bentsen, a pro-business moderate who has turned increasingly protectionist, is eager for trade legislation. "I've been a free trader all my life," he wrote last year. "But it's time for all of us to reassess this basic belief."

Some Democratic leaders would opt for straightforward protectionist barriers, like the quotas called for in last year's textile bill, which Reagan vetoed. South Carolina Senator Ernest "Fritz" Hollings, for example, will probably use his influence as the new Commerce Committee chairman to reintroduce the bill. But most Democrats are leery of import barriers. The idea played poorly in Walter Mondale's presidential campaign, and party strategists believe voters are skeptical of outright protectionist solutions, fearing that they will trigger foreign retaliation, boost inflation, and cost jobs.

MOST DEMOCRATS—and many Republicans—will push instead for comprehensive legislation promising fair trade, open markets, and increased U.S. competitiveness. Rather than slapping on direct import restrictions, Congress will probably tighten up the definition of unfair trade practices and severely restrict the President's discretion in dealing with them. Economist C. Fred Bergsten, who heads the Institute for International Economics, calls this approach "process protectionism" and argues that it is even more dangerous than outright protectionist legislation because it's more subtle, and thus tougher to fight on Capitol Hill.

This year's House bill—which stalled in the Senate—offers many examples of protectionism in its fancy new guise. The most flagrant is a Gephardt amendment that would require the President to reach an agreement with countries such as Japan, West Germany, and Taiwan to reduce their trade surpluses with the U.S. by 10% annually over four years. If they failed to achieve these hefty reductions, the President would be pressured to restrain imports. Gephardt predicts that some variation of his amendment will be included in legislation next year. Another House provision that could pop up again would subject countries to U.S. retaliation if they prevented workers from organizing or did not adopt American health and safety standards. That could trigger import restrictions against most Eastern bloc and developing countries, including Taiwan and Korea.

> Congress will probably produce a bill with subtle protectionist features. The Administration's strategy, says Trade Representative Clayton Yeutter, will be "veto, veto, veto."

Democrats will try to make it easier for industries to win relief under the so-called escape clause provision in trade law, designed to help those hard hit by low-priced imports. Senator Byrd will be pushing legislation that would force swifter action in cases where an industry requests protection on the ground that its woes threaten national security. The machine-tool industry waited three years before Reagan decided to seek voluntary restraints on imports. Says Byrd, who hails from steel-producing West Virginia: "I want the Administration to enforce the trade laws. But if not, we may need additional legislation."

Many economists believe Congress's focus on trade law reform is misplaced and potentially dangerous. Even if the reforms open up foreign markets, as proponents promise, that will make only a minor dent in the U.S. trade deficit—no more than $20 billion, according to economist Bergsten. Meanwhile, if legislation forces the U.S. to shut out some products, American consumers will face much higher prices. Former deputy U.S. trade negotiator Harald Malmgren, now a consultant, maintains that trade legislation will do little to increase U.S. competitiveness. He observes that the companies that clamor for protection still must contend with foreign rivals opening plants in their own backyards, as Nissan, Honda, and Toyota already have done. Pointing to the proposed Japanese acquisitions of Fairchild Semiconductor Corp. and Wall Street bond trader Aubrey C. Lanston, Malmgren warns that raising barriers could touch off a Japanese "takeover binge" in the U.S.

What then is the cure? The Administration insists—and many economists roundly agree—that the best solution is to cut the budget deficit. That would lessen overall demand for credit in the U.S., helping interest rates to decline. Lower interest rates would reduce American companies' cost of capital, making them more competitive, and would also help force the dollar down further.

Congress, however, is only giving lip service to budget deficit reduction. As long as Reagan continues his stiff opposition to tax increases, Democrats will not propose any; and the new Congress is more likely to increase spending than to cut it. The targets set out in the Gramm-Rudman-Hollings deficit reduction law look more and more chimerical. Says William A. Niskanen, chairman of the Cato Institute, a conservative Washington think tank: "Gramm-Rudman will have blown up by this time next year."

Other solutions to the nation's competitiveness problem are a long way from realization. Many economists and business leaders think that increased tax incentives for capital investment and research and development would help. But the new tax law scales back such incentives, and few experts think a major policy reversal is possible next year. Others talk about easing controls on technology exports. But the Administration's preoccupation with national security leaks has torpedoed similar ideas in the past, and probably would again. Some Senators advocate helping Latin America, once a major importer of U.S. goods, boost growth. But Congress and the Administration disagree over how this could be achieved.

The odds are that the 100th Congress will produce an omnibus trade bill, with many subtle protectionist features. The Administration's strategy, says U.S. Trade Representative Clayton Yeutter, will be "veto, veto, veto."

The game then will come down to whether Congress can override the President. The number of lawmakers favoring more rigid trade legislation suggests that Congress can. But history says it can't. Congress has never before passed a major trade bill over a President's veto. Business and consumers should hope that history repeats itself.

■ THE SELLING OFF OF AMERICA MARC RICH'S LAVIS

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DECEMBER 22, 1986

FORTUNE

WALL STREET'S SPREADING SCANDAL

What it means for raiders, traders, and investors

*An exclusive interview:
Floored by the crisis,
Drexel Burnham chief
Fred Joseph tries
to pick up the pieces.*

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DECEMBER 22, 1986

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WALL STREET'S SPREADING SCANDAL

Chief Executive Fred Joseph of Drexel Burnham Lambert, the firm at the center of the unfolding Boesky affair, posed in his Broad Street office for photographer Joyce Ravid. See page 26.

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Because the junk market has grown so large, bad news for Drexel could be bad news for the economy. The sudden decline in prices the week after the SEC's announcement on Boesky gives a taste of what could happen. A junk bond trader at another firm reported that for one hectic day, Drexel was making markets in only a fraction of the junk bonds it normally does. A Drexel spokesman responded: "That's absolutely untrue."

"Perceptions are very important in this market," says George Collins, chairman of the T. Rowe Price High Yield bond fund, which holds about $800 million of these securities. Might there be a run on junk bonds? "There has *already* been a run," replies Collins. It appears that junk prices soon recovered some of the lost ground. James Grant, editor of *Grant's Interest Rate Observer* and no fan of junk bonds, says the market's reaction was milder than back in July when LTV defaulted and prices fell twice as much. Grant feels that the amount of buying that is still going on in the market reflects the "manic end of a cycle when people have suspended their critical judgments." But Edward Altman, a New York University professor of finance and the author of a new book on junk bonds, says, "I'm still bullish. Recession or major defaults are the only forces that could push the market down strongly."

If the Boesky affair results in no charges against Drexel or its employees, the firm will still be left with plenty to worry about. The new Congress will make a fresh stab at regulating junk bonds. Last session, through a combination of intense lobbying and fat political contributions, Drexel and other investment banking firms overwhelmed the proponents of legislation that would limit purchases of junk bonds by savings and loan institutions with federally insured deposits. Wall Street won't carry as much weight with the Democrat-controlled 100th Congress. SEC Chairman John Shad opposes any curbs.

continued

CLOUDS OVER THE JUNK BOND JAMBOREE

■ Junk bonds, like OPEC politics and the behavior of teenagers, are widely discussed but little understood. All bonds are corporate debt obligations with a legal claim on the issuer's assets in a default, and thus are presumed safer than stocks. Junks like those in the table below, some issued to finance leveraged buyouts, are rated BB+ or lower by Standard & Poor's, or Ba1 or below by Moody's. The rating agencies do not consider repayment "well assured," in Moody's words.

According to legend, Drexel's junk bond czar, Mike Milken, seized on an anomaly in the junk bond market while he was studying business at Wharton. He found that individual issuers did tend to go belly up. But the whole group of issuers had a surprisingly low average default rate of 1% or so a year. Since the bonds paid much higher interest than "investment-grade" bonds, investors with diversified portfolios could earn 2% to 4% extra, net of defaults.

Such anomalies are not supposed to endure if the market is efficient. But no one claimed that the junk bond market was efficient, least of all Milken. Market efficiency is not in his interest: The source of his power is his ability to sell bonds. As long as he can offer those premium yields—and issuers go along—he can raise all the capital he wants.

THE TEN BIGGEST JUNK BOND ISSUES

Issuer	Amount in millions
BCI Holdings (Beatrice Cos.)*	$2,500
SCI Holdings (Storer Commun.)*	$2,243
Metromedia Broadcasting*	$1,920
Turner Broadcasting*	$1,400
Safeway Stores Holding*	$1,000
Coastal*	$900
Systems Energy Resources	$750
Rapid-American*	$706
Pacific Lumber*	$680
JSC/MS Holdings (Container Corp.)	$680

*Underwritten or co-managed by Drexel

SOURCE: IDD INFORMATION SERVICES

He started trading these bonds for Drexel during the Sixties. In those days the only junk bonds around were so-called fallen angels: former investment-grade issues downgraded when the companies fell into difficulty. In 1977 Lehman Brothers and Goldman Sachs underwrote the first rated bond *conceived* as junk, an LTV issue that has since defaulted and recently traded at 35% of face value.

Milken saw the potential of junk bonds. The tricks were knowing who the buyers were and what they liked, and winnowing out up-and-coming companies from the losers with which the rating agencies lumped them. Before long, Drexel had become a junk bond underwriter—with a difference. If the issuing companies got in trouble, it would intercede quickly to keep default rates low. It also stood ready to buy bonds back if no one else would.

Milken's Beverly Hills–based junk bond operation built up a powerful network of bond buyers. When Drexel began underwriting leveraged buyouts and hostile takeovers during the early Eighties, the network absorbed the added volume. Since only Milken can arrange financing for the trickiest deals, clients don't even rebel when Drexel represents parties on both sides of a transaction. Apparently nobody minded either that Drexel, and reportedly Milken himself, have demanded equity stakes in the deals they financed. None of these practices are illegal, but they were unconventional when introduced.

Curiously, the spread in yields between Drexel's junk bond index and long-term Treasury bonds was still a startlingly wide 4.75 points at the end of October, even though other players have moved in and the market has become more competitive.

Nevertheless, the quality of junk bonds appears to be deteriorating. High-yield bonds can be ranked in two categories: Call them junk and junk-junk, the latter rated B- or below by S&P. Junk-junk has increased from 6.3% of new issues in 1980 to 41.7% so far this year according to IDD Information Services, which tracks financial markets.

All along, investors have had to worry about recession and rising interest rates. Now looms the possibility that Drexel could emerge from the Boesky crisis greatly weakened or worse. In the event of a serious run on junk bonds, a robust Drexel could in theory commit $8 billion or more to market-making. But not enough to hold up a $150-billion market.

COMPETITION

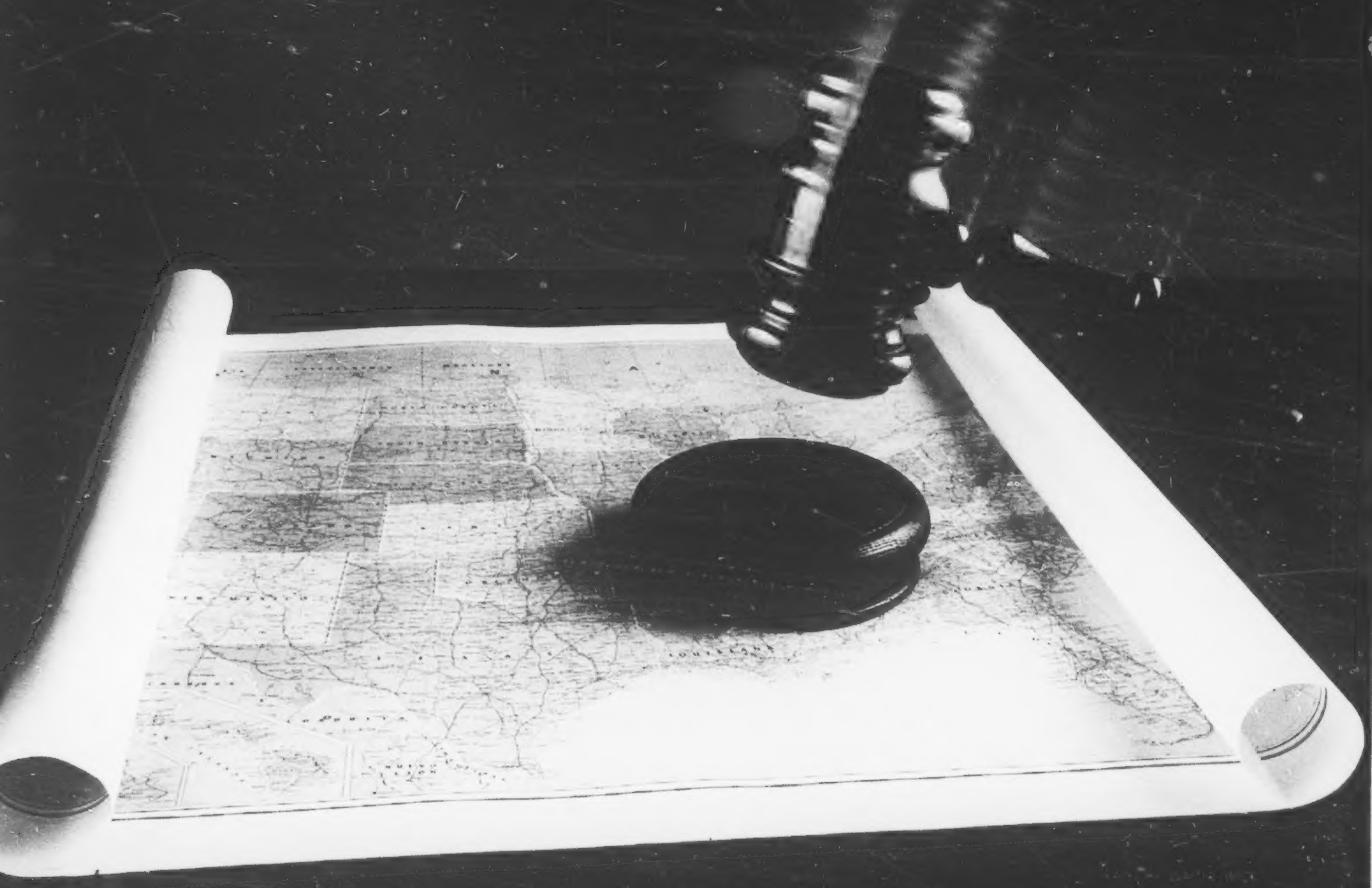
THE SELLING OFF OF AMERICA

Investors from abroad are gobbling up stocks, bonds, real estate, and giant U.S. companies. Foreign holdings total more than $1 trillion and are growing more than $100 billion a year. Don't despair. The friendly invaders are creating new jobs and wealth. ■ *by Jaclyn Fierman*

THE JAPANESE are about to descend on Pearl Harbor again, not to bomb but to build. They will festoon this historic terrain with lagoons, golf courses, swimming pools, tennis courts, and luxury hotels—a billion-dollar vacationland that they hope will rival Waikiki. Set on a stretch of beach just west of the harbor, the resort will employ 6,000 people and add $24 million a year to state taxes. The most ambitious construction project in Hawaii's history, it dwarfs the considerable dabbling the Japanese have done there in the past.

The resort at Oahu's West Beach epitomizes the onslaught of foreign investment in the U.S. Real estate is only part of the action. Offshore investors are also buying up stocks, bonds, Treasury securities, assembly plants, factories, fish, forests, and whole companies, both large and small.

Just six years ago U.S. holdings abroad ex-



ceeded the value of foreign-owned assets in the U.S. by more than $100 billion. Today the positions are reversed. Foreign-owned companies are shaking the foundations of the U.S. construction industry, chipping away at domestic semiconductor manufacturers, and colliding with U.S. car producers. U.S. children are riding to school in buses operated by a Canadian company. American firemen depend on hydrants made by an Arab company in Illinois. Foreigners have bought land in practically every state, a piece of virtually every industry, and one-seventh of the federal debt.

Where did this immense foreign buying power come from? Raise your hands, America. The selling of America is, to a large extent, a byproduct of the nation's gargantuan trade deficit. The U.S. has stuffed the world's pockets with the dollars it pays for foreign products. The biggest beneficiary of America's import binge has been Japan. Despite its obsession with U.S. bagels, burgers, and diapers, Japan came out $50 billion ahead in trade with the U.S. last year and will achieve a surplus of $60 billion this year.

If Americans love foreign products, the foreigners, when it comes to assets, love to buy American. That was true even when the dollar was at nosebleed heights, and doubly so now that the dollar has dropped. The U.S. is cheap, a five-and-dime for countries whose currencies have appreciated up to 50% against the dollar in less than two years. Parking money in the bank no longer satisfies many investors. Increasingly they want U.S. stocks, bonds, and Treasury securities —known in the argot of international finance as portfolio investments. They also want bricks and mortar.

IN TOTAL, foreigners owned about $1 trillion of U.S. assets at the end of last year. Foreign governments, which account for about 20% of that, put most of their money into U.S. Treasury securities. The hefty hunk of America held by foreign corporations and institutional and individual investors breaks down this way: $80 billion of Treasury securities, over $200 billion in corporate stocks and bonds, more than $180 billion in direct investments in U.S. companies, and more than $400 billion in bank deposits, agricultural land, and commercial properties.

The U.S. not only welcomes foreign money but courts it. Mayors and governors are bumping into each other in Europe and Asia at trade shows staged to woo foreign investment. Flat Rock, Michigan, seduced Mazda Motor into building an assembly plant there by waiving property taxes for 14 years. The state of Oklahoma has hired the London investment bank of Morgan Grenfell to lure capital from abroad.

And why not? Just as foreign investment by Coca-Cola, Ford, and other multinationals has benefited the rest of the world, capital coming the other way enriches the U.S. Says Lord Lever, a British businessman who served in the cabinets of Prime Ministers Harold Wilson and James Callaghan: "Europe got 20 times more out of American investment after the war than the multinationals did. Every country gains by productive investment."

A further word of comfort to the xenophobes: The U.S. is hardly being colonized. Foreigners own just 1% of U.S. real estate and farmland and claim less than 5% of corporate earnings. And while foreign companies get to repatriate their profits, the wages they pay and the value added in their manufacturing plants bolster America's gross national product.

Jobs are the most compelling reason to cheer about capital immigration. Foreign companies directly employ some three million Americans, or about 3% of the work force, and create jobs for countless more in shops where those workers spend their paychecks. Unsurprisingly, local merchants and politicians are the foreigners' biggest fans. Ever seen an authentic Japanese rock garden? One is in the works in Chattanooga, Tennessee. Looking for real Nuremberger bratwurst? Try Spartanburg, South Carolina.

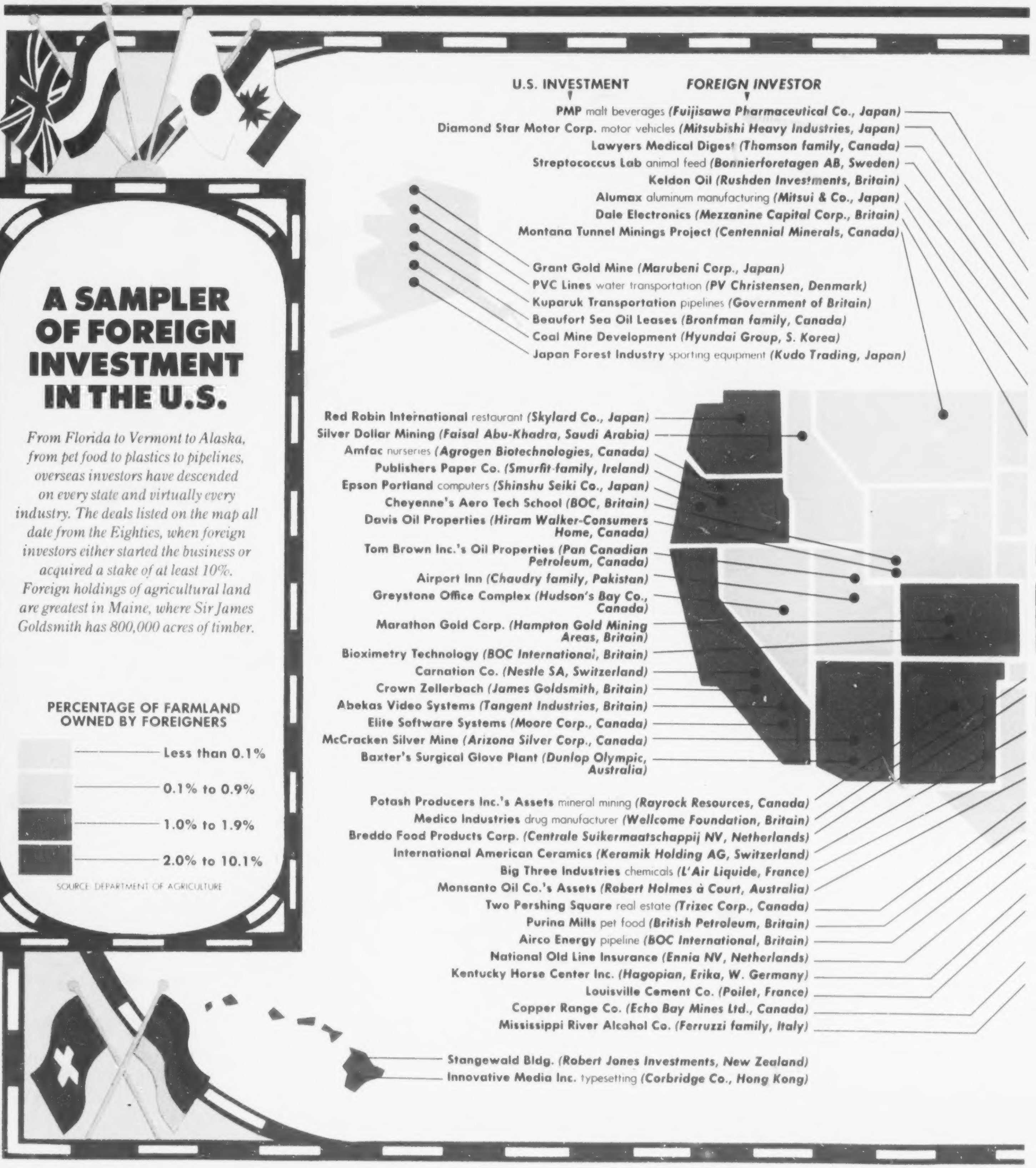
THE SOUTH, with its anti-union bias and cheap electric power, has long been a magnet for overseas investors and now claims one out of every four foreign jobs. Georgia, says Governor Joe Frank Harris, "has been blessed" with investment by more than 900 foreign companies. Texas counts 600 in Houston alone. New Yorkers, Californians, and Hawaiians are feeling the foreign invasion as overseas construction companies transform their skylines. In Alaska the Japanese control large parts of the fishing and timber industries and sign paychecks for 5% of the work force. High-tech industrial parks, some anchored by foreign companies like NEC Information Systems, have set once-depressed New England villages humming again.

The new foreign investor often is brassier and more belligerent than his predecessor of just ten years ago. Setting the style are men like Sir James Goldsmith, the controversial Anglo-French swashbuckler *continued*

REPORTER ASSOCIATE *Carrie Gottlieb*

Soichiro Honda *of Honda Motor owns this country club with a stirring view of the Arizona Memorial (just to the right of the tall building). The club is a favorite of Japanese tourists.*

DAN BUDNICK—WOODFIN CAMP



A SAMPLER OF FOREIGN INVESTMENT IN THE U.S.

From Florida to Vermont to Alaska, from pet food to plastics to pipelines, overseas investors have descended on every state and virtually every industry. The deals listed on the map all date from the Eighties, when foreign investors either started the business or acquired a stake of at least 10%. Foreign holdings of agricultural land are greatest in Maine, where Sir James Goldsmith has 800,000 acres of timber.

PERCENTAGE OF FARMLAND OWNED BY FOREIGNERS

░	Less than 0.1%
▒	0.1% to 0.9%
▓	1.0% to 1.9%
█	2.0% to 10.1%

SOURCE: DEPARTMENT OF AGRICULTURE

U.S. INVESTMENT *FOREIGN INVESTOR*

PMP malt beverages ***(Fuijisawa Pharmaceutical Co., Japan)***
Diamond Star Motor Corp. motor vehicles ***(Mitsubishi Heavy Industries, Japan)***
Lawyers Medical Digest ***(Thomson family, Canada)***
Streptococcus Lab animal feed ***(Bonnierforetagen AB, Sweden)***
Keldon Oil ***(Rushden Investments, Britain)***
Alumax aluminum manufacturing ***(Mitsui & Co., Japan)***
Dale Electronics ***(Mezzanine Capital Corp., Britain)***
Montana Tunnel Minings Project ***(Centennial Minerals, Canada)***

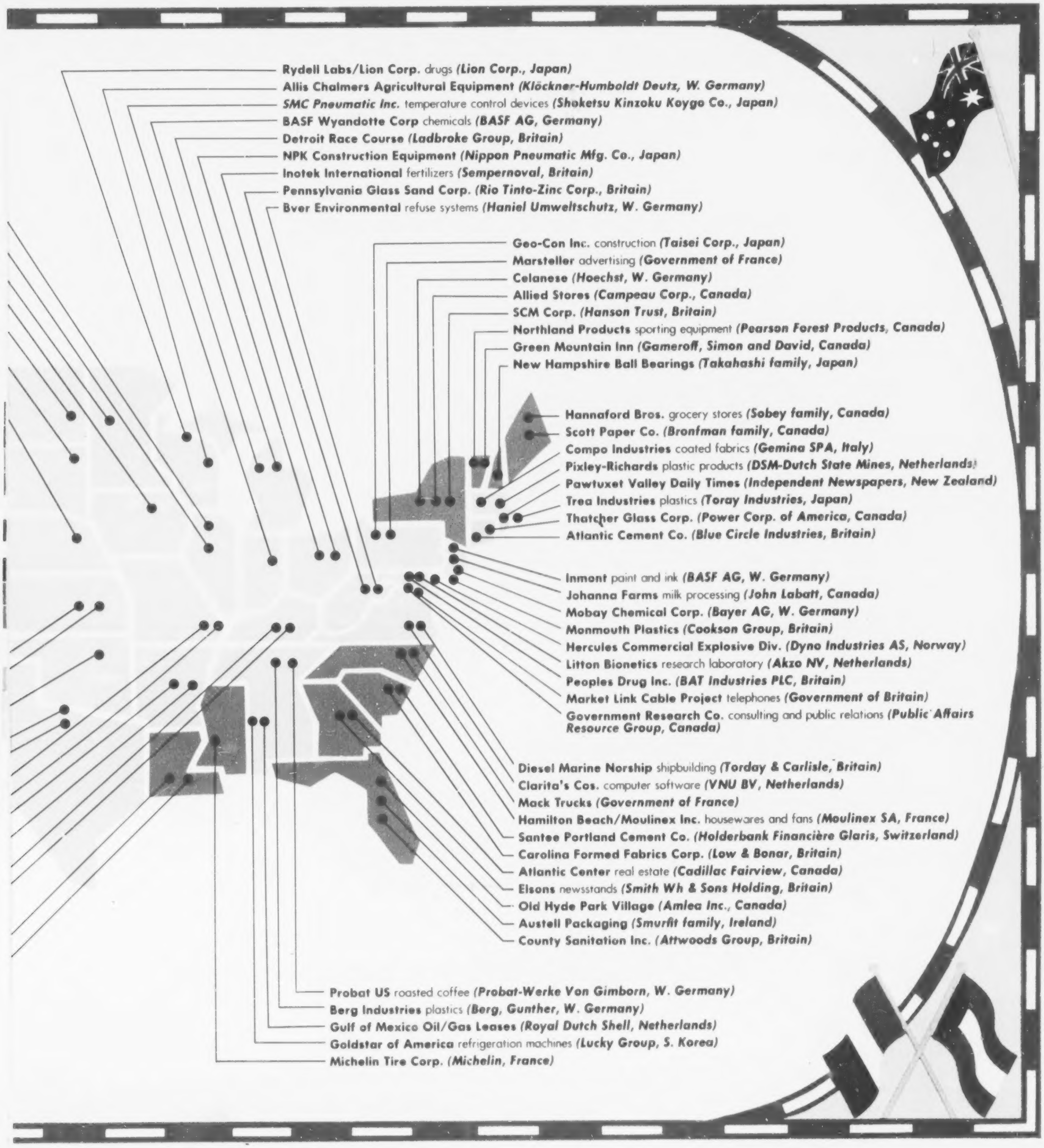
Grant Gold Mine ***(Marubeni Corp., Japan)***
PVC Lines water transportation ***(PV Christensen, Denmark)***
Kuparuk Transportation pipelines ***(Government of Britain)***
Beaufort Sea Oil Leases ***(Bronfman family, Canada)***
Coal Mine Development ***(Hyundai Group, S. Korea)***
Japan Forest Industry sporting equipment ***(Kudo Trading, Japan)***

Red Robin International restaurant ***(Skylard Co., Japan)***
Silver Dollar Mining ***(Faisal Abu-Khadra, Saudi Arabia)***
Amfac nurseries ***(Agrogen Biotechnologies, Canada)***
Publishers Paper Co. ***(Smurfit family, Ireland)***
Epson Portland computers ***(Shinshu Seiki Co., Japan)***
Cheyenne's Aero Tech School ***(BOC, Britain)***
Davis Oil Properties ***(Hiram Walker-Consumers Home, Canada)***
Tom Brown Inc.'s Oil Properties ***(Pan Canadian Petroleum, Canada)***
Airport Inn ***(Chaudry family, Pakistan)***
Greystone Office Complex ***(Hudson's Bay Co., Canada)***
Marathon Gold Corp. ***(Hampton Gold Mining Areas, Britain)***
Bioximetry Technology ***(BOC International, Britain)***
Carnation Co. ***(Nestle SA, Switzerland)***
Crown Zellerbach ***(James Goldsmith, Britain)***
Abekas Video Systems ***(Tangent Industries, Britain)***
Elite Software Systems ***(Moore Corp., Canada)***
McCracken Silver Mine ***(Arizona Silver Corp., Canada)***
Baxter's Surgical Glove Plant ***(Dunlop Olympic, Australia)***

Potash Producers Inc.'s Assets mineral mining ***(Rayrock Resources, Canada)***
Medico Industries drug manufacturer ***(Wellcome Foundation, Britain)***
Breddo Food Products Corp. ***(Centrale Suikermaatschappij NV, Netherlands)***
International American Ceramics ***(Keramik Holding AG, Switzerland)***
Big Three Industries chemicals ***(L'Air Liquide, France)***
Monsanto Oil Co.'s Assets ***(Robert Holmes à Court, Australia)***
Two Pershing Square real estate ***(Trizec Corp., Canada)***
Purina Mills pet food ***(British Petroleum, Britain)***
Airco Energy pipeline ***(BOC International, Britain)***
National Old Line Insurance ***(Ennia NV, Netherlands)***
Kentucky Horse Center Inc. ***(Hagopian, Erika, W. Germany)***
Louisville Cement Co. ***(Poilet, France)***
Copper Range Co. ***(Echo Bay Mines Ltd., Canada)***
Mississippi River Alcohol Co. ***(Ferruzzi family, Italy)***

Stangewald Bldg. ***(Robert Jones Investments, New Zealand)***
Innovative Media Inc. typesetting ***(Corbridge Co., Hong Kong)***

JOHN PIRMAN



Rydell Labs/Lion Corp. drugs ***(Lion Corp., Japan)***
Allis Chalmers Agricultural Equipment ***(Klöckner-Humboldt Deutz, W. Germany)***
SMC Pneumatic Inc. temperature control devices ***(Shoketsu Kinzoku Koygo Co., Japan)***
BASF Wyandotte Corp chemicals ***(BASF AG, Germany)***
Detroit Race Course ***(Ladbroke Group, Britain)***
NPK Construction Equipment ***(Nippon Pneumatic Mfg. Co., Japan)***
Inotek International fertilizers ***(Sempernoval, Britain)***
Pennsylvania Glass Sand Corp. ***(Rio Tinto-Zinc Corp., Britain)***
Bver Environmental refuse systems ***(Haniel Umweltschutz, W. Germany)***

Geo-Con Inc. construction ***(Taisei Corp., Japan)***
Marsteller advertising **(Government of France)**
Celanese ***(Hoechst, W. Germany)***
Allied Stores ***(Campeau Corp., Canada)***
SCM Corp. ***(Hanson Trust, Britain)***
Northland Products sporting equipment ***(Pearson Forest Products, Canada)***
Green Mountain Inn ***(Gameroff, Simon and David, Canada)***
New Hampshire Ball Bearings ***(Takahashi family, Japan)***

Hannaford Bros. grocery stores ***(Sobey family, Canada)***
Scott Paper Co. ***(Bronfman family, Canada)***
Compo Industries coated fabrics ***(Gemina SPA, Italy)***
Pixley-Richards plastic products ***(DSM-Dutch State Mines, Netherlands)***
Pawtuxet Valley Daily Times ***(Independent Newspapers, New Zealand)***
Trea Industries plastics ***(Toray Industries, Japan)***
Thatcher Glass Corp. ***(Power Corp. of America, Canada)***
Atlantic Cement Co. ***(Blue Circle Industries, Britain)***

Inmont paint and ink ***(BASF AG, W. Germany)***
Johanna Farms milk processing ***(John Labatt, Canada)***
Mobay Chemical Corp. ***(Bayer AG, W. Germany)***
Monmouth Plastics ***(Cookson Group, Britain)***
Hercules Commercial Explosive Div. ***(Dyno Industries AS, Norway)***
Litton Bionetics research laboratory ***(Akzo NV, Netherlands)***
Peoples Drug Inc. ***(BAT Industries PLC, Britain)***
Market Link Cable Project telephones **(Government of Britain)**
Government Research Co. consulting and public relations ***(Public Affairs Resource Group, Canada)***

Diesel Marine Norship shipbuilding ***(Torday & Carlisle, Britain)***
Clarita's Cos. computer software ***(VNU BV, Netherlands)***
Mack Trucks ***(Government of France)***
Hamilton Beach/Moulinex Inc. housewares and fans ***(Moulinex SA, France)***
Santee Portland Cement Co. ***(Holderbank Financière Glaris, Switzerland)***
Carolina Formed Fabrics Corp. ***(Low & Bonar, Britain)***
Atlantic Center real estate ***(Cadillac Fairview, Canada)***
Elsons newsstands ***(Smith Wh & Sons Holding, Britain)***
Old Hyde Park Village ***(Amlea Inc., Canada)***
Austell Packaging ***(Smurfit family, Ireland)***
County Sanitation Inc. ***(Attwoods Group, Britain)***

Probat US roasted coffee ***(Probat-Werke Von Gimborn, W. Germany)***
Berg Industries plastics ***(Berg, Gunther, W. Germany)***
Gulf of Mexico Oil/Gas Leases ***(Royal Dutch Shell, Netherlands)***
Goldstar of America refrigeration machines ***(Lucky Group, S. Korea)***
Michelin Tire Corp. ***(Michelin, France)***

whose U.S. holdings include 3.5 million acres of timberland and 371 Grand Union supermarkets. "Foreign investment is an emotional issue in every country," he says. "But America, whether it likes it or not, is the only free world. It is bound to attract foreigners."

Goodyear plainly did not like it when the company attracted a $5-billion takeover bid from Goldsmith in November. Though Goldsmith eventually relented after Goodyear offered him $90 million more than he had paid for 11.5% of the company's stock, he forced management to retread. Goodyear put its oil and gas division on the block and has other restructuring plans in the works.

Another swaggering force from abroad is Sir Gordon White, commander of stateside expeditionary troops for Hanson Trust, the British holding company. One of Goldsmith's backers in the Goodyear assault, White burns plenty of rubber on his own. He has bought a bevy of U.S. companies that generate a total of $3 billion a year in sales for Hanson. Among them are Endicott Johnson, where American mothers drag their children for those dreaded "sensible" shoes, and Ball Park franks.

Early this year White made takeover history with the $930-million acquisition of SCM. White tendered for the company but withdrew the offer after a four-month scuffle. Then he turned around and bought control of SCM from arbitragers who had accumulated large blocks of stock during the tender offer. Some prominent members of the takeover community contend the ploy violated U.S. takeover laws, but the courts sided with White. He currently is sitting on a $5-billion war chest and says he is "quite prepared to act as a White knight [pun intended]" in future takeovers.

Britons have long been the biggest direct investors in the U.S. and now have more than $44 billion in American assets. (Direct, as opposed to portfolio, investment includes start-ups of new operations and purchases of more than 10% of a U.S. company.) The British spent a $6-billion bundle last year, nearly one-third of the $19.5 billion of foreign direct investment, and are at it again in 1986. Their purchases through September amounted to $8.7 billion. The Netherlands ranks second in direct investment. Led by Royal Dutch Shell, with its long-standing oil investments, Dutch holdings in the U.S. are worth over $36 billion.

Japan has amassed over $19 billion in direct investments—most of them in the Eighties—and has moved into third place. That total does not include all of Japan's towering real estate investments. This year alone, Japanese investors will spend more than $4 billion on real estate. The Japanese Economic Institute in Washington says Japanese corporations own 50% or more of at least 400 U.S. assembly or manufacturing companies, employing some 110,000 people.

Foreigners have also been busily fattening their portfolio investments. Institutional and individual investors increased their holdings of stocks and bonds by nearly $80 billion last year. Their appetite for corporate debt was voracious: Net purchases came to a stunning $49 billion, pushing the total value of their bonds over $80 billion. Foreigners also rode the Wall Street bull. They snatched up $30 billion in new shares, bringing their stock holdings to $126 billion.

OVERSEAS INVESTORS boosted their holdings of Treasury securities 13% last year, to $220 billion. By taking so much of the national debt off America's hands, foreigners have made the government's enormous budget deficits less painful for the credit markets to absorb. Salomon Brothers estimates that foreign investors are buying up to 30% of the $190 billion in new government issues this year.

The biggest takers are the Japanese. The Security Dealers Association of Japan estimates that Japanese portfolio investments will be worth $45 billion at the end of the year, up from a trifling $300 million just four

FOREIGN DIRECT INVESTMENT

BY INDUSTRY	1980 BILLIONS	1985 BILLIONS
Manufacturing	$33.0	**$60.8**
Petroleum	$12.2	**$28.1**
Wholesale trade	$11.5	**$27.5**
Real estate	$6.1	**$18.6**
Banking	$4.6	**$11.5**
Insurance	$6.1	**$11.0**
Retail Trade	$3.6	**$6.7**
Finance	$1.3	**$4.7**
Mining	$1.3	**$4.0**
Other	$3.2	**$10.0**

SOURCE: U.S. DEPARTMENT OF COMMERCE

BY COUNTRY	1980 BILLIONS	1985 BILLIONS
Britain	$14.1	**$43.8**
Netherlands	$19.1	**$36.1**
Japan	$4.7	**$19.1**
Canada	$12.1	**$16.7**
W. Germany	$7.6	**$14.4**
Switzerland	$5.0	**$11.0**
France	$3.7	**$6.3**
Kuwait	$0.3	**$4.0**
Australia	$0.3	**$2.7**
Sweden	$1.7	**$2.4**

BIGGEST DEALS OF 1986

COMPANY	COUNTRY	TARGET	VALUE MILLIONS
Campeau	Canada	Allied Stores	$3,200
Hoechst	W. Germany	Celanese	$2,850
L'Air Liquide	France	Big Three Industries	$1,100
Hongkong & Shanghai Banking	Hong Kong	First Pennsylvania	$860
Electrolux Group	Sweden	White Consolidated	$743
Prudential Corp. PLC	Britain	Jackson Nat. Life Insurance	$597
Boots	Britain	Flint Laboratories	$555
Dainippon Ink & Chemicals	Japan	Sun Chemical[1]	$550
British Petroleum	Britain	Purina Mills	$545
Sumitomo Bank	Japan	Goldman Sachs[2]	$500

[1] Ink and pigment divisions. [2] 12.5% stake.

years ago. Japan's net purchases of Treasury securities have been averaging a steamy $8 billion a month. The pace has quickened since March, when the Japanese government eased restrictions on offshore investments by institutions. Pension funds can now send 30% of their assets abroad, up from 10% before. Japanese investors are also grabbing U.S. blue chips. Net stock purchases totaled $2 billion in the first half of this year.

TAX REFORM will make the U.S. even more attractive. The new maximum corporate tax rate—40% in 1987 and 34% in 1988—will be the lowest in the industrial world. Foreigners also see the U.S. as a technology hothouse and are supplying almost one-quarter of America's venture capital to ensure themselves a stake in new discoveries (see box, page 52).

America's attractiveness, though, transcends high-tech and taxes. For many companies, setting up shop in the U.S. is a strategic imperative. The potential customer base makes that of any other country look paltry. In 1983 Laidlaw Transportation Ltd. of Canada, the biggest school bus operator in North America, moved south of the border, where it saw considerably more room to grow. Business has quadrupled and Laidlaw now draws over $400 million—60% of its revenues—from the U.S. Siemens, the Munich electronics giant, poured $750 million into U.S. operations this year to be closer to its biggest customers. Chairman Karlheinz Kaske says his company must have "a slice of the cake in the U.S." to achieve full economies of scale and cover its research-and-development budget.

Bertelsmann, Germany's leading media group, left New York publishing circles speechless recently when it paid almost $500 million—about 70 times fiscal 1986 earnings—for Doubleday. But relative to what Doubleday would have cost Bertelsmann if the Germans had bought when the dollar was high, the purchase was a steal. Says Bertelsmann Chairman Mark Woessner: "Anyone who wants to operate in the media market with enduring success must have a strong supporting leg in the U.S." Bertelsmann reckons it will pick up an extra $1.2 billion in sales by straddling the Atlantic, pushing total revenues over $5 billion.

For the discerning investor, America's vast industrial base has always been chockablock with good buys. Bargains abound, from Texas refineries to Silicon Valley start-ups. Says Hoong Bee Teck, assistant general manager of Singapore's Wearnes Technology: "We have been able to acquire several small computer-component manufacturers and make something of them because of our low overhead." U.S. movie theater owners, discouraged by competition from videocassette recorders and cable television, have been turning out the lights and dumping properties. But Garth Drabinsky, chairman of the Canadian company Cineplex, has put popcorn makers back to work in some 300 cinemas across the country. His U.S. theaters, among the most profitable in the nation, distinguish themselves with more hit movies, bubble gum–free seats, and fresher popcorn.

DAN BUDNICK—WOODFIN CAMP

Shuhei Okuda *has no squawks as overseer of Mitsui's $250-million resort on Waikiki.*

The growing protectionist mood in America has prompted some foreign manufacturers to lay down roots before their products get stuck behind costly or insurmountable trade barriers. First came the Japanese automakers; next, their suppliers. Others were not far behind. Goldstar, a South Korean company fined for dumping color televisions in the U.S., has built a TV and microwave-oven assembly plant in Huntsville, Alabama. Japanese semiconductor manufacturers, accused of dumping on American shores, have invested $200 million over the past 18 months to open or expand a dozen U.S. production facilities.

For wealthy individuals the U.S. is the safest haven in an unpredictable world. They rest easier at night knowing their cash is stowed under the great American mattress. Residents of Hong Kong, which reverts to Chinese rule in 1997, have been socking away cash in the U.S. for years. Other Asians agree. Liem Sioe Liong, an Indonesian banker and manufacturer, bought San Francisco's Hibernia Bank (assets: $1.9 billion) because he wanted his money in a politically stable spot.

continued

Shuwa Corp.'s Shigeru Kobayashi, *a top dog in U.S. real estate, is buying on both coasts.*

CAROLINE PARSONS

Chastened by the collapse in oil prices, Arabs are shunning things liquid. Rather than park their money in the bank—which is largely what OPEC did in the Seventies when it was awash in oil revenues—Arabs now are opting for long-term bonds and cash cows, businesses as dependable and all-American as department stores and health clubs. Typical of the new Arab spirit is Arabian Investment Banking Corp. Services, a Bahrain-based group that includes the ruling families, major banks, and businessmen in the Gulf States. Called Investcorp for short, the four-year-old firm took its first big plunge in the U.S. in 1984 when it bought Tiffany & Co. for $110 million. (It has since sold most of the elegant New York jewelry store to Tiffany management and General Electric Credit Corp.) Its less glamorous investments include Mueller Co., a 129-year-old company in Decatur, Illinois, that is the nation's premier fire hydrant producer. "We look for equity we can sell on the streets of Bahrain as easily as on the streets of New York," says Michael Merritt, the American who is Investcorp's executive director.

ANDY FREEBERG

Sir Gordon White *of Hanson Trust rewrote U.S. takeover rules when he snared SCM.*

Perhaps no investment better embodies the security, stability, and yields that foreign investors covet than U.S. real estate. Translated literally, the Japanese word for real estate means immovable asset. A prized resource throughout the world, prime property is so scarce in Japan that it has become truly immovable—it rarely, if ever, changes hands. Starved for opportunities at home, Shuwa Corp., one of Japan's biggest real estate players, spent $620 million in October for Arco Plaza in Los Angeles and the ABC headquarters in New York. The British also have an appetite for real estate. They own close to $1 billion worth in Washington, D.C., alone, including a big piece of the Watergate complex.

The real estate research group at Salomon Brothers estimates that foreigners own $24 billion in developed U.S. property, still a minute share of the $2.3-trillion total but quadruple the level of 1980. Japan's stake, which includes nine of the 12 largest hotels on Waikiki, exceeds $4 billion. These numbers are only ballpark guesses by industry experts, who base their calculations on publicly announced deals and incomplete government data. Actual foreign holdings almost surely are much higher (see box, page 56).

It may surprise American homebuyers, but many foreigners find U.S. property dirt cheap. A square foot of prime midtown Manhattan office space is selling for around $350. A comparable square foot in Tokyo, if you can find one for sale, goes for $4,000. New York commercial real estate has been yielding about 7.5% lately, a shade higher than Treasury bills. Net operating income on many Tokyo buildings runs about 2%. Last year Japanese brokerage firms used the come-on "Let's Become Manhattan Landlords" to sell shares of New York's Rockefeller Center. They reportedly unloaded $175 million worth in one day.

Beknighted Jimmy Goldsmith, *raider by trade, soaks up the sun aboard his yacht in Italy.*

J. DONOSO—SYGMA

THE JAPANESE want to do more than just own U.S. properties; they want to build them. Last year their construction companies landed close to $2 billion in U.S. contracts, according to the trade publication *International Construction Week.* That was less than 1% of the total, but 18 times the amount in 1982 and more than enough to irk domestic competitors. Part of the reason they are winning contracts is that they can borrow money from Japanese banks at low interest rates and pass the savings along in their bids. They are also sticking their necks out as investors. "Japanese builders are willing to come in with U.S. developers and be their equity partners. That's very unusual," says Jack Shaffer, a director of Sonnenblick-Goldman, a New York mortgage banker that has ushered in much of the foreign real estate money.

Premier among the new Japanese builders is Kumagai Gumi, the most profitable construction company in Japan. Kumagai Gumi is expected to be the general contractor for the West Beach resort near Pearl Harbor and is also building hotels on Maui and Kauai. In New York City the company is participating in eight projects worth $1 billion with developer William Zeckendorf Jr. The most ambitious is the transformation of the old Madison Square Garden site from a parking lot into $550 million of commercial, retail, and residential space. Says Zeckendorf of his Japanese partners: "Unlike what others may tell you, I find they move quickly, have very specific goals, and are loyal."

ANOTHER GROUNDBREAKER in Hawaii is Halekulani Corp., a construction subsidiary of Japan's giant Mitsui Real Estate Development Co. Its 450-room hotel on Waikiki Beach, a $250-million project, employs 600 people. "Japan has no room for projects of this scale," says Shuhei Okuda, president of Halekulani. The company has another 300-room luxury hotel called Waikiki Parc under construction nearby.

The idea of foreigners buying and building U.S. skyscrapers hasn't seemed to faze Americans. What does rankle—as it does in most countries—is aliens owning farmland. They now own some 12.1 million acres of it in the U.S. Thirty states limit the amount foreigners can buy, and Minnesota forbids foreign ownership altogether. Kentucky still has a seldom enforced century-old law that allows the state to confiscate foreign-owned land unless the buyer becomes a U.S. citizen within eight years. Strictly speaking, Sheikh Hamdan bin Rashid al Maktoum of Dubai, who owns 1,010 acres in the state, will have to sell the land in seven years or become an American commoner.

The Japanese are beginning to arouse the same degree of xenophobia that the Arabs did at the height of OPEC's power. "We have closer cultural and linguistic ties with the English and the Dutch," says Jeffrey Rosensweig, international economist at the Federal Reserve Bank of Atlanta. "Their U.S. investments don't worry us as much as Asian or Arab investments." When a county manager in Virginia was planning a trip abroad to recruit foreign investment, executives of electronics and telecommunications firms in his area asked him to leave Asia off his itinerary. As one international investment banker puts it, "There are foreigners and there are foreigners."

Fujitsu discovered the meaning of that quip in October after announcing its $225-million bid for 80% of Fairchild Semiconductor, a maker of chips used in sophisticated weaponry. No one blinked when Schlumberger, a Netherlands Antilles company, bought Fairchild in 1979, but the government is making Fujitsu sweat while the National

FOREIGN FLIERS ON HIGH-TECH FRONTIERS

■ Foreign investors have become a surprisingly important source of cash for fledgling technology companies in the U.S. Of the $2.3 billion that venture capital funds raised last year, nearly one-quarter came from overseas. The foreigners are not so much interested in the promise of financial gain as they are in the wealth of new technology they hope to reap.

Young U.S. companies, dispirited by flagging support from domestic investors, find the foreign link irresistible. In trading technology for cash, start-ups also gain easy entrée to foreign markets. Their partners can catapult them into the global arena as soon as the start-ups are ready to sell their products.

A typical match made in venture heaven: Plant Genetics, a biotechnology company in Davis, California, and Japan's Kirin Brewery Co., one of the largest brewers in the world. Plant Genetics is trying to develop more bountiful and disease-resistant strains of alfalfa, potatoes, and tomatoes. Technicians from both companies work together to produce the seeds in test tubes and petri dishes. They then prepare the seeds for the ground by encasing them in a synthetic gel patented by Plant Genetics.

Kirin, which hopes to exploit the technology, invested $3 million for 3% of the company and a stake in its discoveries. Says Chief Financial Officer Robert DeDominic: "If we cannot get the chance to exploit this leading technology except with foreign money, we may as well take advantage of it. American companies have been slow to recognize the long-term possibilities of this research."

Foreign investors are also giving U.S. technology companies time to bring their ideas to fruition—something they need as much as cash. Says G. Steven Burrill, head of the high-technology consulting group at the accounting firm of Arthur Young: "American investors need earnings trends quarter to quarter. The Japanese are much more patient." Going abroad used to be a last resort for many U.S. entrepreneurs. Increasingly foreign money is becoming the capital of choice.

Kirin Brewery *supplied capital for synthetic seed research in California.*

JOHN HARDING

CRAFTED WITH PRIDE IN U.S.A.
What Does It Mean to the People of Hoechst Fibers?
Hoechst

TERRY PARKE

Paul Foerster *of Hoechst Fibers is wild about the wage rates in Spartanburg, South Carolina.*

Security Council reviews the deal. "We're in a major competitive position with Japan," says Paul Freedenberg, an assistant secretary at the Commerce Department, which is reviewing the proposal. "We want to be careful."

Freedenberg should perhaps consider other things Fujitsu is bringing to the table, including new management skills. After studying more than 150 Japanese-owned companies in the U.S., Martin Starr of the Columbia business school found that their absentee rates were lower and product quality higher than at comparable American-owned companies. Half the Japanese-owned operations had defect rates of less than 0.5%. U.S.-owned factories generally have to chuck or repair between 3% and 5% of their output. Says Starr: "Japanese managers in the U.S. foster team spirit in the workers by linking incentives to group productivity."

IN THE SOUTH and Northeast, foreign investment has helped diversify and revive dying oil and mill towns. Spartanburg, South Carolina, whose survival 20 years ago was dependent on textiles and agriculture, is busy turning peach farms into industrial parks. Typical tenants: Alcoa Fujikura, a fiber-optics joint venture, and SEW Eurodrive, a West German maker of conveyor-belt drive systems.

Spartanburg has so many German and Swiss companies that locals have dubbed the stretch of Interstate 85 that runs through town the Autobahn. Some 7,000 Spartans, as the natives are called, now work for 60 foreign companies that have invested $1 billion there. What foreigners find especially attractive is the town's cheap labor. "People here are willing to do a day's work for a day's pay," says Paul Foerster, executive vice president of operations at Spartanburg's Hoechst Fibers, a subsidiary of the German chemical giant, which plans to acquire Celanese for $2.85 billion.

While usually irreproachable, foreign investment can occasionally get so exploitative that it drains rather than creates capital. One egregious example is the fish-processing industry in Alaska. For most of the year a fleet of some 100 ships crowds Alaska's waters 50 miles offshore. The boats, over 300 feet long and six stories high, are floating factories that process Alaska's abundant supplies of pollock, cod, and other bottom fish. The flags they fly are foreign, mostly Japanese. Working aboard the ships are foreign nationals who pay no U.S. taxes. Alaska even loses out on sales of food and fuel. Foreign tankers resupply the ships in high-seas rendezvous.

The floating factories are equipped with processing lines that gut and skin the fish and with desalination plants that produce fresh water to wash them. The boats can turn five tons of fish worth $600 into one ton of a gloppy paste used to make surimi, a crabmeat substitute. Surimi sells for $3,000 a ton. Each ship can churn out 80 tons of paste a day.

Alaska has just begun to haul the processing industry onshore. State officials persuaded Nippon Suisan Kaisha and Taiyo Fisheries to invest in surimi plants at Dutch Harbor in the Aleutian Islands. The Nippon Suisan plant is wholly owned by the Japanese, and the Taiyo plant is a joint venture with Wards Cove, a Seattle company. Onshore revenues are minnowish compared with those offshore, but they buoy the economy and morale of Dutch Harbor. "They pay property

Kumagai Gumi's *Richard Katano, left, and Hiro Saito have eight pieces of the Manhattan rock.*

DELMA
515
WORLDWIDE PLAZA

ANDY FREEBERG

taxes," says Mayor Paul Fuhs. "They pay state taxes. They have 40 employees who spend money here."

If we have convinced you by now that foreign investment is a great thing for America, let us add a caveat for mayors and governors: Look all these gift horses in the mouth. Don't give away more than you are going to get. You may even need—horrors—an MBA on your staff to run the numbers for you. Some areas seem so desperate for business that they will give away virtually anything to foreign or domestic corporations.

Consider the deal Toyota got to build an $800-million plant on the outskirts of Georgetown, Kentucky. When it begins churning out Camrys in 1988, Toyota will employ 3,000 people, add $24.4 million to bank deposits, and boost retail sales by $32.7 million a year. But at what price? The state promised Toyota 1,500 acres of free land, $47 million in new roads, and $65 million in employee training programs. Georgetown is stuck paying for new policemen and firemen and a sewer system to handle the 120 tons of waste Toyota will generate every day. The tab could run $8 million a year. Georgetown's current budget is only $2 million. "Let's just say the solons of Georgetown are not the most sophisticated financial minds around," sniffs Montgomery Securities auto analyst Ronald Glantz. (For more on Toyota, see Corporate Performance.)

As long as the U.S. sells itself intelligently, foreign investment is a windfall for the nation. When foreigners set up companies in the U.S., they increase not only output and employment but also the tax base, and that cuts down on the nation's budget deficit.

Granted, the U.S. gross national product would be higher if Americans owned all the production facilities on U.S. soil. If foreign investment were not replacing U.S. investment—if domestic auto producers, for example, were competitive enough to satisfy U.S. consumers—the country would be that much richer. But with General Motors laying off 29,000 workers in Michigan, Ohio, Missouri, and Illinois, the U.S. should roll out the red carpet for the seven Japanese manufacturers investing here.

A foreign-owned factory that hums around the clock is far preferable to an American-owned one that is shuttered. "I don't give a damn who owns my industries as long as they are successful," says British statesman Lord Lever. The U.S. shouldn't care either as long as the fire hydrants don't leak, the school buses run on time, and the cinema seats stay bubble gum free. **F**

THE QUIET BILLIONS UNCLE SAM CAN'T TRACK

■ No one knows the exact dimensions of foreign investment in the U.S. A dozen federal agencies—including the Commerce Department, the SEC, the IRS, and the CIA—collect data on the subject. But they keep most of the information confidential and make no attempt to coordinate their findings. The numbers that get published are usually in aggregate form, revealing neither the buyer's name nor the actual investment. The result is a hodgepodge of statistics that "only God comprehends and the rest of us struggle with," says an economist at the Commerce Department's Bureau of Economic Analysis.

U.S. disclosure requirements, while numerous and sometimes onerous, allow untold amounts of foreign investment to slip through the cracks. The most glaring example of the government's inability to track capital flows is the "statistical discrepancy" entry at the bottom of the balance-of-payments data. That number, representing undocumented dollars that apparently flow into the U.S., now averages an astonishing $25 billion a year.

ANDY FREEBERG

Corazon Aquino *says Ferdinand Marcos owns the Crown Building, a Manhattan jewel.*

Economists are universally stumped by the number but agree that at least a portion of it represents flight capital. Most of the money smuggled into the U.S. gets deposited in banks, but some is spent on real estate and other assets. The statistical discrepancy probably includes, for instance, some of the $5 billion that Philippine President Corazon Aquino accuses Ferdinand Marcos of stealing to buy such baubles as the Manhattan skyscraper pictured here.

Property ownership in general is a big question mark. All those Latin American-owned condominiums in Florida, for instance, don't show up in the numbers because the government collects data only on commercial properties. The Foreign Agricultural Investment Disclosure Act of 1978 requires foreign purchasers of U.S. farm and ranch land to register with the Department of Agriculture. But investors can easily remain anonymous—and often do—by hiding behind dummy corporations. Says Texas Congressman John Bryant, who has introduced legislation to tighten disclosure requirements: "We often can't tell whether a foreign investor is a legitimate business, a hostile nation, a drug trafficker, or a tax evader."

Critics of Bryant's bill contend that closer scrutiny of the money coming into the U.S. would cost too much and discourage the inflow of foreign capital. But chances are that legitimate money would continue coming however exacting the disclosure laws. "As an investment banker, I'm opposed to any regulations that might make it harder for me to earn money," says Lewis Ranieri, 39, who in January will become co-vice chairman of Salomon Brothers. "But as a citizen of the U.S., I have to say this country's policymakers should know how much of our resources are in the hands of non-Americans."

JANUARY 5, 1987

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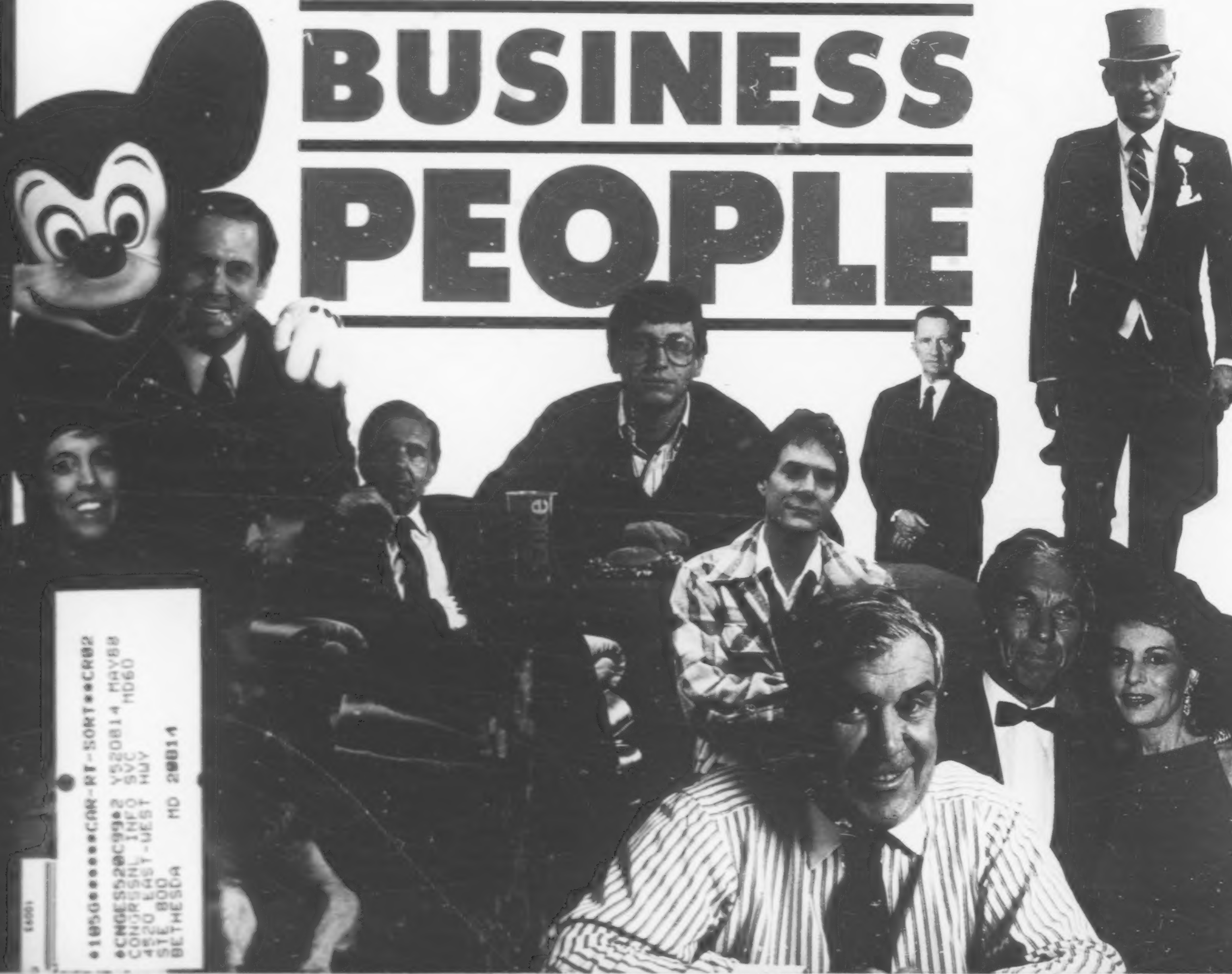
THE YEAR'S 50 MOST FASCINATING BUSINESS PEOPLE



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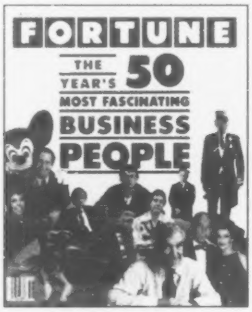

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Exxon's fire sale

■ If asbestos lurks about the premises, even the most prestigious address won't protect a landlord against a depressed sales price. **Exxon** and **Rockefeller Group Inc.** got fewer nibbles and lower bids than expected when they put Exxon's 54-story headquarters at New York's Rockefeller Center on the block in October, hoping to sell by year-end in order to beat the new tax law. Buyer **Mitsui Real Estate Development** invoked the asbestos in the skyscraper's fireproofing to help knock down the price to $610 million, at least $100 million less than what Exxon had hoped.

One-fifth of the nation's 3.7 million office and apartment buildings share Exxon's predicament, according to the Environmental Protection Agency. Asbestos became widely used in construction after the end of World War II; not until 1973 did the government recognize that it causes cancer.

Buildings like Exxon's present no health hazards—as long as the asbestos stays isolated behind walls and ceilings. But renovation work or aging can release the fibers into the air, a deadly danger that makes insurers and corporate tenants worry about potential litigation. So serious is the problem that the federal government no longer leases space in buildings with asbestos, and many top U.S. lenders, like **Aetna Life & Casualty**, refuse to finance property where the fiber is present.

Landlords can solve an asbestos problem with time and money. **Metropolitan Life**, owner of the Pan Am Building in New York, brings in specially trained workers equipped with protective clothing and respirators to remove asbestos whenever tenants vacate a floor. The job costs about $20 a square foot.

Making the Exxon Building entirely safe could cost Mitsui as much as $50 million, estimates Hajime Tsuboi, president of the $3-billion-a-year Japanese firm. "It will be a big problem when there is major renovation," he says. Mitsui will probably face that 2.3-million-square-foot headache between now and 1998, when the last of the current leases expires.

The Exxon tower is Mitsui's now.

NINA BARNETT

PRIVATIZED BRITISH COMPANIES	STOCK PRICES When issued	(date)	As of 12/11/86
Amersham International	**$2.62**	(2/82)	**$6.41**
Associated British Ports	**$.86**	(2/83)	**$4.48**
British Aerospace	**$3.44**	(2/81)	**$6.95**
British Telecom	**$1.61**	(11/84)	**$2.86**
Britoil	**$3.51**	(11/82)	**$2.12**
Cable & Wireless	**$1.55**	(10/81)	**$4.60**
Enterprise Oil	**$2.55**	(6/84)	**$2.09**
Jaguar	**$2.18**	(7/84)	**$7.53**

SOURCE: AMERICAN EXPRESS BANK LTD.

British Gas
ENERGY IS OUR BUSINESS

MONITOR PHOTOGRAPHY LIMITED

The British Gas *public offering was advertised everywhere, even on the floor of the London Stock Exchange. Investors may have good reason to get excited. Shares of other privatized companies have outperformed the London bull market on average by nearly 60%.*

How goes global privatization?

■ The capitalist road still looks like yellow brick to governments around the world. In December, Britain, which has already returned $10 billion of assets to the private sector since 1981, sold off **British Gas**, raising $8 billion in the largest equity offer ever. Soon after, the French kicked off an ambitious privatization campaign with the sale of stock in **Saint-Gobain**, a glass and building materials manufacturer (see Personal Investing). Italy, West Germany, Spain, and Austria are also returning national businesses to private investors. In other parts of the world, Chile and Turkey are thinking about privatizing some companies; Singapore and Malaysia have already sold off their state-owned airlines.

Judging by the British experience, privatization is a good deal. The prices of shares in denationalized British companies have risen almost 60% higher on average than the *Financial Times* 500 stock index. That performance would have been even better but for two privatized oil companies, **Britoil** and **Enterprise Oil**, which suffered from the continuing depression in world oil prices. The government plans to part with several more companies—**British Airways** and **Rolls-Royce** among them—over the next two years.

The opposition Labour party platform calls for renationalizing some companies that Prime Minister Margaret Thatcher has sold off. That would be expensive: Taking back **Jaguar** alone, whose stock has soared 220% since it was privatized, would cost $1.4 billion at current prices. Besides, executives who have learned to prosper in the free market are unlikely to want the government on their boards and on their backs. Says Richard O'Brien, London-based editor of the *AMEX Bank Review*: "Once you privatize, it's difficult to turn it back."

continued

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■ A SURPRISING 18-MONTH FORECAST: FASTER GROW

FORTUNE

JANUARY 19, 1987

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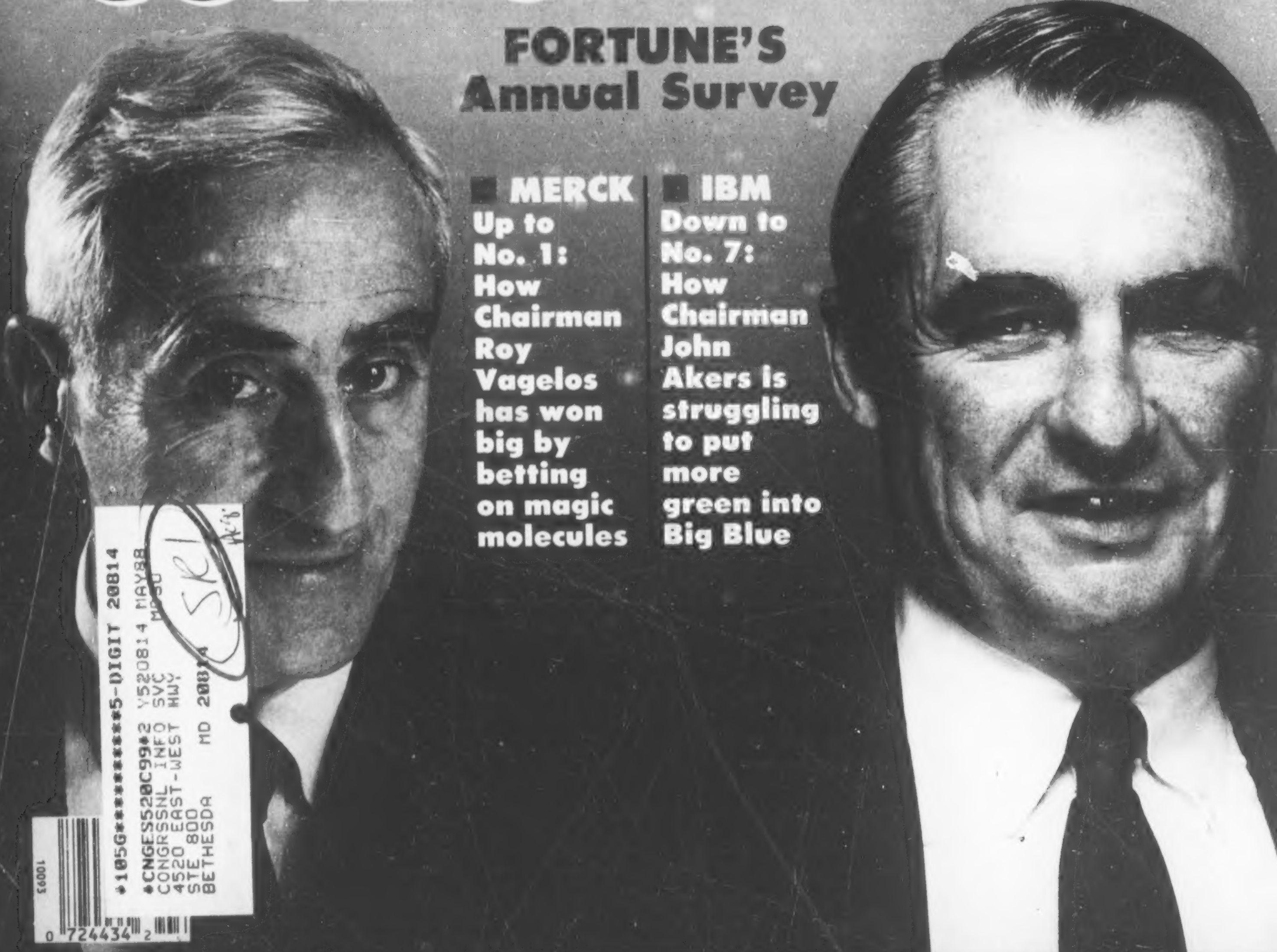
AMERICA'S MOST ADMIRED CORPORATIONS

FORTUNE'S Annual Survey



■ MERCK Up to No. 1: How Chairman Roy Vagelos has won big by betting on magic molecules

■ IBM Down to No. 7: How Chairman John Akers is struggling to put more green into Big Blue

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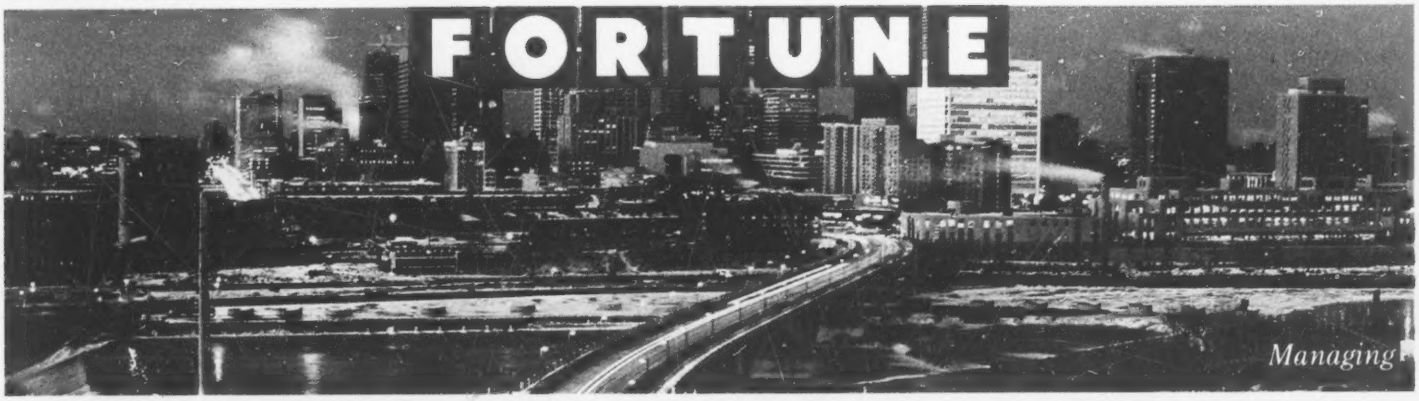

FORTUNE
AMERICA'S MOST ADMIRED CORPORATIONS

E. J. Camp took this picture of Roy Vagelos (left), the chairman of Merck. IBM's chairman John Akers (right) was photographed by Andy Freeberg. See page 18.

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mailboxes and woos small business people by selling office supplies, printing business cards, and photocopying.

John Bell, former postmaster of Sausalito, California, is an enthusiastic franchisee. He offers a special inducement for students who rent boxes at his San Francisco center. If they phone in, he lets them know if they have received a letter from home, presumably one with a check inside. Who ever heard of calling the U.S. Post Office for such glad tidings?

Capital raises

■ The days of Congressmen crying that they live on peanut butter sandwiches and sleep at the YMCA could soon be over. Federal judges, agency heads, and Congressmen could get hefty raises if the President adopts the recommendations of an independent commission. The betting is that Reagan will be generous, but no softy.

Top federal officials have not had a raise since 1977, while inflation has almost halved the purchasing power of each dollar they earn. "I will likely be required to remortgage my home to educate my son," complains U.S. District Judge Donald Ziegler of Pennsylvania. Small wonder that the government is hard pressed to find and retain good people. Says Ann Banning, Reagan's recruitment director: "It is the wealthy, the very young, and those in the concluding phases of their careers who increasingly constitute our candidate pool."

The federal commission is pushing for pay hikes of up to 80% for some 3,000 officials, at a cost of around $150 million. The souped-up salaries still would not match those of people with equivalent jobs in the private sector. But they would at least transform government service from martyrdom to mere personal sacrifice.

Relief is also at hand for some of the nation's 1.2 million civil servants. Reagan wants to replace seniority raises with merit raises, a switch designed to thrill talented, ambitious bureaucrats, though it may not be so popular with more complacent types. Another proposed change: Government employees would be allowed to make a certain number of heretofore illegal personal calls during working hours.

UNEQUAL PAY ?

GOVERNMENT JOB	PRIVATE SECTOR EQUIVALENT
Secretary of the Treasury **Salary now: $86,200** **Proposed: $160,000**	**C.E.O. of major money center bank** **Average: $585,000**
Secretary of Defense **Salary now: $86,200** **Proposed: $160,000**	**C.E.O. of major defense contractor** **Average: $1.2 million**
Congressman **Salary now: $75,100** **Proposed: $160,000**	**Middle-level partner at top law firm** **Average: $500,000**
Chief Justice of the U.S. **Salary now: $108,400** **Proposed: $175,000**	**Chief attorney at large corporation** **Average: $157,000**

SOURCE: BOYDEN INTERNATIONAL

CAPITAL CITIES/ABC INC

ABC is refusing to pay stations to air its latest miniseries, Amerika

The coming storm in televisionland

■ Christmas was not very merry for television stations across the U.S. The nation's three major networks, all under frugal new management, are threatening to reduce the millions of dollars they pay affiliates to run their TV shows. The practice, called compensation, dates back to the networks' radio days in the 1920s, when **CBS** and **NBC** adopted it as a way to induce local stations to sign up. In 1986 the networks handed affiliates a staggering $450 million in compensation payments.

The new bosses consider the practice an extravagance. Debate on the subject has been furious. "This is the most complex and emotional issue we have ever dealt with," says Tony C. Malara, senior vice president of distribution for CBS.

ABC threw the first punch in early December, when it told its board of affiliates that it would no longer pay stations to air special events such as the Academy Awards and the Olympics. When the local station chiefs objected, ABC said it would discuss the matter with them again at the end of January. But a week later it transmitted a closed-circuit televised message to the affiliates that it was going ahead with its plan. The first uncompensated broadcast: *Amerika,* a controversial miniseries about life in the 1990s following a Soviet takeover of the United States, set to run beginning February 15.

CBS may phase out compensation for stations in the top 100 markets—from Lansing, Michigan, on up to New York—over three years. The rationale: Large stations depend on compensation much less than small ones. NBC, the top-ranked network, says it has no immediate plans to cut compensation; industry executives say it is merely waiting to see what the competition does.

To the affiliates, the networks' plans are ill conceived. "The networks are doing the right thing in trying to cut costs; they've just found the wrong

FORTUNE

CORPORATE PERFORMANCE/COVER STORIES

AMERICA'S MOST ADMIRED CORPORATIONS

The king is dethroned: IBM, No. 1 since the survey began, drops to seventh place. Long live the king: Merck is the new leader among 300 big companies. GM plunges from No. 16 to No. 109. Bringing up the rear are LTV and—no surprise—BankAmerica.

■ *by Edward C. Baig*

IN ALL the first four years of FORTUNE's annual survey of the most admired companies in America, one corporation has reigned as No. 1. But not in the latest survey. IBM is still right up there among the top ten of 300 American companies rated by thousands of corporate officers and other experts, but it has fallen to seventh place. Big Blue is blushing a bit. "I'd much rather be first," says John Akers, IBM's chief executive. "We've gone from being perhaps too invincible to perhaps having more problems than people expected."

The new king: Merck, the New Jersey-based pharmaceutical company. Merck, fifth overall a year ago, has made news with some of the hottest new drugs on the market—including Vasotec for high blood pressure and Primaxin, an injectable antibiotic for severe bacterial infections. (For an appraisal of the strategy and future of IBM and Merck, see the following articles.)

Merck and IBM are the only companies that have appeared in the top ten in all five annual surveys. Boeing, the new No. 3, and Dow Jones, No. 9, have made the cut four straight years. Other top ten repeaters: Rubbermaid (No. 5) and J.P. Morgan (No. 4). Three companies make their first appearance at the top: Liz Claiborne, at No. 2; Shell Oil, No. 6; and Herman Miller, No. 10.

Competition among the elite is heating up. Exxon was squeezed out of the ten best despite a slight increase in its approval score. The oil giant is 13th, just above Coca-Cola, another dropout from last year's top ten. 3M, last year's runner-up, finds itself in 19th place this time; Procter & Gamble, No. 8 a year ago, slipped to No. 18.

The ten most admired companies have made lots of money for their stockholders. Their median return on equity for 1985 was 19.75%, and every one bested the FORTUNE 500's median ROE of 11.6%. The most admired list's 1985 median total return to investors—stock price appreciation plus dividends—was an outstanding 49.9%, vs. 26.3% for the 500. Total return for the longer term isn't bad: The median for the top ten was 18.8% annually over ten years, against the 500's 17.04%. By contrast, total return for the ten companies on the least admired roster was dismal—a median of just 2.7%.

HOW IT WAS DONE

■ To compile the rankings of 300 companies in 33 industry groups, FORTUNE late last year polled more than 8,200 senior executives, outside directors, and financial analysts. About half responded—a good return. One who declined was Lee Iacocca. "I am afraid my bias might skew the results of your study," wrote the Chrysler chairman. (Even without his vote, however, Chrysler finished a strong second behind Ford in the motor vehicles group.) Respondents were asked to rate the companies in their own industry on eight key measures of reputation, using a scale of 0 (poor) to 10 (excellent). The eight attributes are: quality of management; quality of products or services; innovativeness; long-term investment value; financial soundness; ability to attract, develop, and keep talented people; community and environmental responsibility; and use of corporate assets.

That least admired list is littered with money losers and repeaters. Seven of the bottom ten were in the red in 1985; eight out of ten have been among the bottom group at least once before. And two—American Motors and Pan Am—are the antitheses of IBM and Merck: They have been among the ten least admired companies in all five surveys. Asbestos-plagued Manville is a four-time loser; Financial Corp., a savings and loan giant, has been in the bottom ten three times.

LTV, BankAmerica, and Bethlehem Steel were among the least admired a year ago. And Trans World Airlines, a cellar dweller twice before, is back after a one-year absence from the survey, which is limited to the top ten companies in sales or assets for each industry. Manhattan Industries, new to the survey, and Union Carbide, new to the bottom ten, round out the list of losers. Two of last year's ten bottom fish barely escaped this time: Amax and Control Data floated up to 12th and 11th from the survey floor.

FORTUNE's corporate reputations survey ranks the ten largest companies in each of 33 industry groups that appear in the annual FORTUNE 500 and FORTUNE Service 500 directories of industrial and nonindustrial corporations. (In groups that have fewer than ten companies, fewer than ten are ranked.) The groups are based on categories estab-

REPORTER ASSOCIATE *Barbara Hetzer*

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AT THE TOP AND BOTTOM OF THE 300 COMPANIES

RANK	COMPANY	SCORE
1	**Merck** Pharmaceuticals	8.38
2	**Liz Claiborne** Apparel	8.02
3	**Boeing** Aerospace	7.99
4	**J.P. Morgan** Commercial banking	7.95
5	**Rubbermaid** Rubber and plastic products	7.94
6	**Shell Oil** Petroleum refining	7.91[1]
7	**IBM** Office equipment, computers	7.91[1]
8	**Johnson & Johnson** Pharmaceuticals	7.86
9	**Dow Jones** Publishing, printing	7.84[2]
10	**Herman Miller** Furniture	7.84[2]

The most admired

Merck dethrones IBM, No. 1 since the survey began and the only other company in the top ten every year. Liz Claiborne and Herman Miller make their debut.

RANK	COMPANY	SCORE
300	**LTV** Metals	3.11
299	**BankAmerica** Commercial banking	3.28
298	**American Motors** Motor vehicles and parts	3.45
297	**Financial Corp. of Amer.** Savings institutions	3.46
296	**Manville** Glass, building materials	3.64
295	**Bethlehem Steel** Metals	3.69
294	**Pan Am** Transportation	3.73
293	**Union Carbide** Chemicals	4.16
292	**Manhattan Industries** Apparel	4.30
291	**Trans World Airlines** Transportation	4.31

The least admired

LTV and Manville are both in Chapter 11 and back at the bottom of the list. The least admired company of 1985, Financial Corp. of America, moves up a little.

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[1] Shell Oil scores higher than IBM in five of eight attributes.

[2] Dow Jones scores higher than Herman Miller in six of eight attributes.

lished by the U.S. Office of Management and Budget. To appear in the survey, an industry group must contain at least four companies.

The latest study, which evaluates 300 companies, adds two categories to the previous list—furniture, which contained only three companies last year, and savings institutions, a split-off from the diversified financial classification. Companies are assigned to industry groups according to the business that contributed most to 1985 sales. Some umpiring is required. For example, since Trinova Corp. (formerly Libbey-Owens-Ford) did not sell off its glass business until April 1986, it is rated among building material companies rather than among industrial and farm equipment concerns, where it believes it belongs. Because Household International disposed of all its retailing operations before the start of 1986, it was eliminated from the survey.

OF THE TEN companies whose average point scores (see box) changed the most, only four improved. H.F. Ahmanson and Great Western Financial, both Southern California savings and loans, made the largest leaps. Largely because its profits quadrupled in 1985, Ahmanson jumped 173 places to No. 47 overall; Great Western, whose profits doubled that year, hurdled 176 places to No. 34. Increased mortgage lending, stimulated by lower interest rates, helped both S&Ls rebound from the money-losing years of the early 1980s. The two S&Ls finished first and second in the new savings institution category. A year ago, as diversified financial companies, Great Western and Ahmanson were seventh and eighth respectively.

Toymakers and vehicle manufacturers dominate the list of companies that lost the largest number of points. Hurt by a decline in popularity of some of their biggest sellers were Mattel, which makes the Masters of the Universe line, and Coleco, producer of Cabbage Patch Kids. Mack Trucks and Fruehauf skidded off the highway; GM went over a cliff, plummeting from 16th place to 109th. GM profits have sagged, Saturn small-car production has been delayed, and the company has announced that it will close nine plants and parts of two others employing some 29,000 workers in all. GM dropped in all eight attributes of reputation rated by FORTUNE's experts, with quality of management sinking from No. 13 a year ago to No. 153. Says David Healy, an auto analyst with Drexel Burnham Lambert: "I suppose three years ago Chief Executive Roger Smith was a hero. Today Roger Smith is a bum."

EIGHT KEY ATTRIBUTES OF REPUTATION

Quality of management

MOST ADMIRED	SCORE
Liz Claiborne	8.98
J.P. Morgan	8.53
Rubbermaid	8.49

LEAST ADMIRED	SCORE
BankAmerica	3.15
LTV	3.33
Pan Am	3.96

Quality of products or services

MOST ADMIRED	SCORE
Dow Jones	8.77
Merck	8.75
Boeing	8.73

LEAST ADMIRED	SCORE
American Motors	4.23
Financial Corp. of America	4.51
Pan Am	4.60

The new champion, Merck, finished first handily. It beat runner-up Liz Claiborne by 8.38 points to 8.02. Merck ranked first overall in long-term investment value and ability to attract, develop, and keep people, and finished no lower than fifth in any other attribute. "Because we're in the business of improving people's health," says P. Roy Vagelos, the M.D. who runs Merck, "our reputation is probably more important than the amount of money we make." Vasotec and Primaxin brought in around $300 million of Merck's estimated $4 billion in 1986 sales. Within its industry, Merck finished first in seven attributes and was second only to Johnson & Johnson in community and environmental responsibility.

Liz Claiborne Inc., which has helped many professional women achieve a stylish look, has tailored a nifty corporate image for itself. One of the youngest companies ever to make the FORTUNE 500—it got on that list after just ten years—Liz Claiborne is first in innovation and in quality of management, though you'd have a hard time convincing President Liz Claiborne of it. "We keep criticizing ourselves for how poorly we manage the company," says the boss, whose name is sewn on every label. Claiborne's management, which takes a team approach, appears to be cut from finer cloth than that of most other firms in the rag trade, a notoriously mismanaged bunch. So does its stock performance: The share price has multiplied 29 times since the company went public in 1981.

Climbing three notches to No. 3 overall, Boeing ranks third among all companies in both quality of products and services and ability to attract people, and fourth in quality of management. Boeing outdistanced its nine aerospace competitors in every attribute of reputation. In 1986 the company wrote some 340 new airplane orders worth about $19 billion, helped by the 747-400, a lighter, more efficient version of its popular jumbo jet that will go into service in 1988.

J.P. Morgan has deposited itself in fourth place, up from tenth a year ago. The conser-

Innovativeness

MOST ADMIRED	SCORE
Liz Claiborne	9.00
Gannett	8.41
Herman Miller	8.37

LEAST ADMIRED	SCORE
Bethlehem Steel	3.29
BankAmerica	3.37
American Motors	3.73

Financial soundness

MOST ADMIRED	SCORE
Exxon	9.23
IBM	9.14
Merck	8.96

LEAST ADMIRED	SCORE
LTV	1.38
BankAmerica	1.81
Financial Corp. of America and American Motors (tie)	1.99

Community and environmental responsibility

MOST ADMIRED	SCORE
Johnson & Johnson	8.21
IBM	7.93
Merck	7.48

LEAST ADMIRED	SCORE
Manville	3.47
LTV	3.74
E.F. Hutton	3.80

Long-term investment value

MOST ADMIRED	SCORE
Merck	8.47
RJR Nabisco	8.43
Philip Morris	8.21

LEAST ADMIRED	SCORE
LTV	1.90
American Motors	3.24
Bethlehem Steel	3.30

Ability to attract, develop, and keep talented people

MOST ADMIRED	SCORE
Merck	8.39
J.P. Morgan	8.23
Boeing	8.03

LEAST ADMIRED	SCORE
BankAmerica	3.14
LTV	3.40
American Motors	3.93

Use of corporate assets

MOST ADMIRED	SCORE
RJR Nabisco	8.11
Merck	8.08
Liz Claiborne	8.00

LEAST ADMIRED	SCORE
BankAmerica (tie) LTV (tie)	2.65
Financial Corp. of America	2.95

vative commercial bank is second in both quality of management and ability to attract, develop, and keep talented people. It ranks fourth in wise use of corporate assets, and fifth in both value as a long-term investment and soundness of financial position. Through the third quarter of 1986, Morgan outperformed all major banks in return on assets, return on equity, and loan quality. For Chairman Lewis Preston, keeping good people around may be the hardest of the attributes to maintain. "Yuppies move faster than old types like me," says Preston. "We generally lose people to investment banks or to industry. If we lose to other banks, the fellow who moves ought to have his head examined."

No. 5 Rubbermaid's success is based on a constant stream of new products—more than 300 over the past five years, from microwave cookware to plastic patio furniture. No. 7 overall a year ago, Rubbermaid ranks third in quality of management, fifth in quality of products and services, and in the top ten for three other attributes. The company is meeting most of the goals Chairman Stanley Gault set in 1980: net income and earnings per share have grown on a compounded annual basis by at least 15%; sales growth falls just short at 14.5%.

The sixth-place ranking of Shell Oil may reflect some confidence in its parent, the Royal Dutch/Shell Group of the Netherlands and Britain. Shell Oil, which operates independently, saw earnings decline more than a third during the first nine months of 1986. Despite the profitability problems affecting its industry, Shell ranks fourth in financial soundness, fifth in use of corporate assets, and seventh in management quality, innovativeness, and ability to attract, develop, and keep good people. "You have to be willing to challenge people and always advance them a little bit sooner than you think you should," says John Bookout, Shell's chief executive. The downside of that approach: "We drill dry holes with people just like we drill dry holes looking for oil and gas." Within its industry, Shell is tops in all but three categories; rival Exxon wins out for financial soundness, value as a long-term investment, and responsibility to the environment.

AT IBM, the chips are down. "The short-term financial performance of the company isn't up to our expectations, the investing public's expectations, or our customers' expectations," says C.E.O. Akers. "I would expect that in the not-too-distant future, we will be back." Among all 300 companies this year IBM ranks second in financial soundness, fifth in ability to attract people, eighth in long-term investment value, ninth in quality of management, and tenth in use of corporate assets. Last year it was first in all those attributes. IBM improved in one ranking, climbing from No. 4 to No. 2 in environmental and community responsibility. The company demonstrated some of that responsibility in November. At that time IBM announced that to increase operating efficiency it would close down a major parts-distribution center in

Greencastle, Indiana. But IBM said it would lay off no employees. Instead, everyone will be offered new jobs elsewhere. IBM has proposed to give the community the 234-acre site and the 350,000-square-foot building.

"The place reputation really counts is with your customers," says James Burke, chairman of Johnson & Johnson. Eighth overall, up from 11th last year, the company ranks first in responsibility to community and environment. "We got a lot of visibility due to the Tylenol crisis," says Burke. No. 9 Dow Jones, publisher of the *Wall Street Journal* and *Barron's*, ranks highest for quality of products and services for the fourth year in a row. But sluggish national advertising at the *Journal* and other publications may account for Dow Jones's slip from third place overall last year. The company dropped from No. 3 to No. 10 in soundness of financial position, and from No. 3 to No. 11 in value as a long-term investment.

Newcomer Herman Miller, the manufacturer of office furniture, rounds out the top ten. Of the ten most admired companies, the Zeeland, Michigan, firm has the highest total return on an annual basis: 49.75%. Earnings have grown an average of 30% a year for a decade. No. 3 for innovation, Herman Miller showed its stuff in September by introducing a "silver parachute plan" under which workers with at least two years' service are entitled to a full year's severance pay in the event of a hostile takeover.

EMPLOYEES OF the companies at the bottom of the pile should be so lucky. LTV, least admired of the 300 companies, is barely breathing. Toiling through Chapter 11 proceedings, the stumbling steelmaker, second largest in the U.S. after USX, scored a rusty 3.11. LTV wrote off $2.1 billion in the third quarter, which could have the effect of shifting some of its pension obligations to the federal Pension Benefit Guaranty Corp. The quarterly charge against earnings was the second largest in U.S. corporate history; AT&T took a $5.5-billion hit in 1983, just before its breakup. LTV stands no higher than 294th in any attribute (quality of products or services) and comes in last, at a piddling 1.38, for value as a long-term investment and soundness of financial position. Within the metals group, LTV is the worst performer in every category except innovativeness, where Bethlehem Steel ranks last.

Additional write-offs or bankruptcies could happen at other metals companies. A possible candidate: Bethlehem, No. 295 on the survey and next to worst in the seven attributes besides innovation. The company lost $187 million through the first nine months of 1986, and Chairman Walter Williams has set no timetable for renewed profitability. "There are too darn many uncertainties ahead," he says. Since 1982 Bethlehem has shed over 30% of its raw steelmaking capacity, dropping to less than 16 million tons, and further cutbacks are likely. It has paid no dividends on its common stock since 1985, and last year it sold off an engineering subsidiary and several other operations not involved with making steel.

BankAmerica deposed C.E.O. Samuel Armacost and brought back an old warrior to try to reverse the corporate fortunes. More

THE MIXED FATE OF THE CLASS OF 1983

■ How have the fortunes of the companies at the top and bottom of the initial FORTUNE corporate reputation survey changed since the first lists were published in January 1983? Would the stocks of those most admired companies have been a better investment than the stocks of the least admired? Answers: Most of the top ten in the original survey of 200 companies still get high marks from their peers—and from investors. Less expectably, the stocks of some of 1983's lowest-ranking ten have been plum pickings for contrarians. (Total returns were calculated using stock prices at the end of 1982 and at the end of November 1986, or earlier in case of a takeover. The results assume that dividends were reinvested at the end of each calendar year.)

Only three of 1983's least admired ten appear in the current survey. RCA, No. 194 of the 200 companies in the original survey, was acquired last June by No. 9, General Electric; from year-end 1982 through the time of the merger, RCA's annualized total return to its shareholders was 40%, second best of all 20 companies top and bottom. Crown Zellerbach investors earned a decent 20% a year until James River Corp. of Virginia (No. 94 on this year's list) bought the company in October. And assuming they grabbed the money and ran, investors earned a nifty 31% annualized return when Republic Steel was taken over in June 1984 by LTV, the least admired company today. A&P and Woolworth, too small to qualify for the current survey, made bargain hunters happy. Boosted by improved margins, the stocks of both retailers outperformed all top ten companies in 1983's survey.

Some corporate wallflowers failed to blossom. International Harvester, now Navistar International, and National Steel, absorbed into National Intergroup, have fresh names if not fresh prospects. Navistar crawled out of the bottom ten—barely—and earned a mediocre return. In the continuing steel slump, the stock of National Intergroup hit the pits. So did Tesoro Petroleum, an oil field services company hurt by lackluster drilling activity, and American Motors, stuck in the mud since 1983.

1983: The most admired companies

1983 RANK	THIS YEAR	COMPANY	TOTAL RETURN
1	7	IBM	10.83
2	23	Hewlett-Packard	5.13
3	8	Johnson & Johnson	11.32
4	70	Eastman Kodak	9.32
5	1	Merck	29.62
6	106	AT&T	21.36
7	15	Digital Equipment	20.68
8	135	SmithKline Beckman	12.08
9	22	General Electric	19.01
10	47	General Mills	25.10

. . . and the least admired

1983 RANK	THIS YEAR	COMPANY	TOTAL RETURN
200	284	International Harvester[1]	7.42
199	—	A&P	32.23
198	298	American Motors	(17.46)
197	294	Pan Am	11.87
196	—	F.W. Woolworth	41.83
195	—	Crown Zellerbach	19.66[3]
194	—	RCA	40.16[4]
193	—	Republic Steel	30.60[5]
192	—	Tesoro Petroleum	(7.21)
191	—	National Steel[2]	(2.42)

[1] Name changed to Navistar International, February 21, 1986
[2] Name changed to National Intergroup, as part of restructuring September 13, 1983
[3] Through October 30, 1986, acquired by James River Corp. of Virginia
[4] Through June 9, 1986, acquired by General Electric
[5] Through June 29, 1984, acquired by LTV

than five years after he left to head the World Bank, A.W. Clausen, 63, took the helm again in October. He has his work cut out for him. BankAmerica ranked No. 299 overall and last among commercial banks in every key attribute except community and environmental responsibility, where it came in No. 8. Through the first three quarters of 1986, BankAmerica lost $600 million and accumulated loan losses of $1.5 billion. Its loan quality was the worst among all major banks, with a 4.4% ratio of nonperforming assets to total assets (J.P. Morgan's was 0.89%). First Interstate, a bank half BankAmerica's size, is making a takeover run at the company.

American Motors is parked in a familiar spot. At No. 298, the money-losing automaker is near the bottom again. Although its Jeep models have consistently won industrywide awards for best four-wheel-drive vehicles, AMC gets the worst mark of all companies for quality of products and services. The company expects a profit for the last quarter of 1986, and it's betting the garage on a new line of bigger Renault models produced at a $675-million plant in Canada.

FINANCIAL Corp. of America escaped the cellar, but not by much. The largest U.S. savings institution, which owns American Savings & Loan Association, it is in the 297th position this time. In its category, FCA ranks tenth in every attribute. Although one of only three least admired companies to show a net profit in 1985, FCA is still losing money on an operating basis. The problem: delinquent loans. Chairman William Popejoy is putting on his best face. He expects a "meaningful" operating profit in the fourth quarter. And the best news, he says, is that just two years after FCA lost $590 million, the biggest ever for an S&L, "people don't talk about us failing anymore."

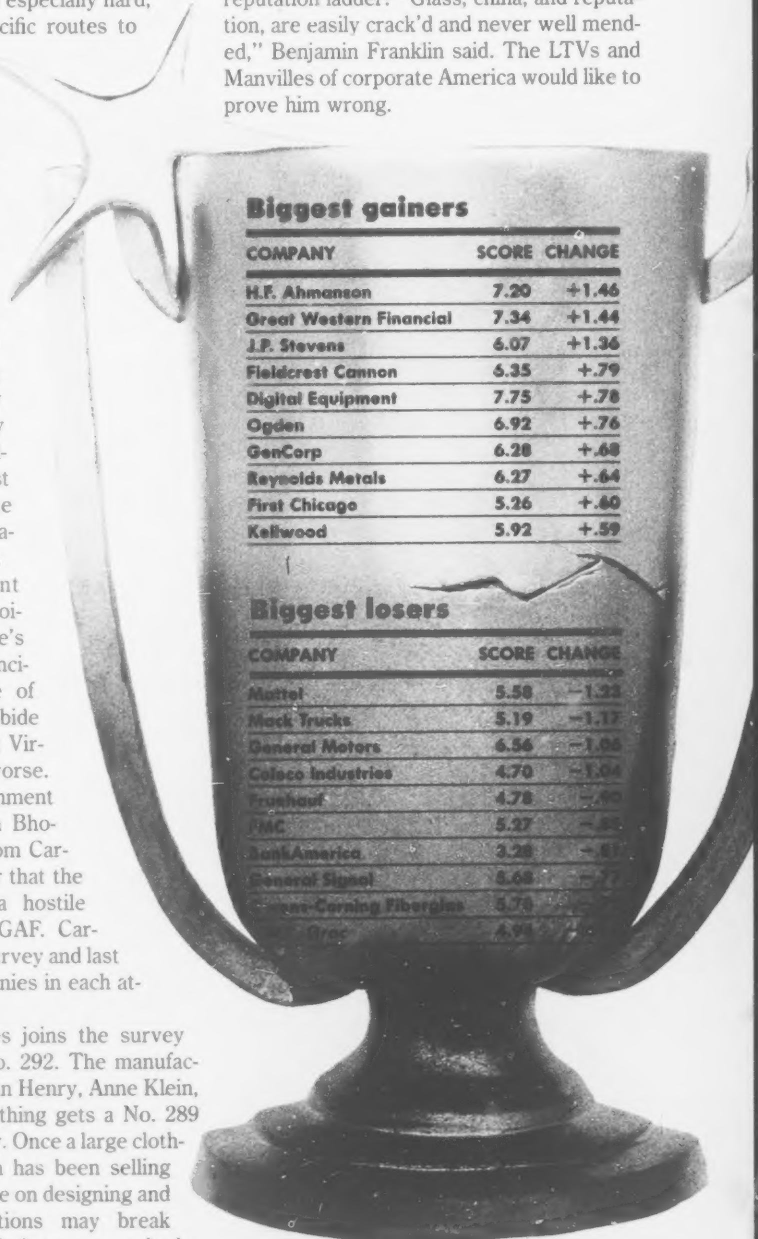
Though No. 296, Manville Corp., uses golfing great Jack Nicklaus as a spokesman in television commercials, the company is still a long way from the green despite its new management. Manville has been in Chapter 11 since August 1982, but it might finally escape in 1987. A reorganization plan that included a $2.5-billion to $3-billion trust fund for asbestos victims was approved in December by all of the company's creditors except common shareholders. (Two groups of shareholders are attacking the plan in the appeals courts.) Manville ranks last in community and environmental responsibility. "I think that perception is increasingly less deserved," says Barbara Alexander, a Salomon Brothers analyst. "But I wouldn't expect it to change until the company is operating out of the constraints of bankruptcy."

Trans World Airlines, No. 291, and Pan Am, No. 294, can't get their reputations to take off. Within the transportation industry, they fare no better than ninth in any attribute. Terrorism killed traffic on transatlantic flights, stinging Pan Am especially hard, since it sold off its Pacific routes to United in 1985. Clearer skies may be ahead. Pan Am is aggressively challenging Eastern with hourly shuttle flights between New York and Boston and Washington. TWA made what analysts think is a smart pickup in Ozark Air Lines. Under Carl Icahn, TWA is paring down. "He's probably saved the company $600 million to $800 million a year on the cost side," says Candace Browning, an airline analyst at Wertheim & Co.

The Bhopal accident late in 1984 began the poisoning of Union Carbide's reputation, and a later incident involving release of toxic gases at a Carbide plant in Institute, West Virginia, made matters worse. Then the Indian government rejected a $350-million Bhopal settlement offer from Carbide, and not long after that the company fought off a hostile takeover attempt by GAF. Carbide is No. 293 in the survey and last among chemical companies in each attribute of reputation.

Manhattan Industries joins the survey near the bottom, at No. 292. The manufacturer of Perry Ellis, John Henry, Anne Klein, and other designer clothing gets a No. 289 rating in product quality. Once a large clothing retailer, Manhattan has been selling off stores to concentrate on designing and manufacturing. Operations may break even for the year, partly because results include $5 million from insurance following the death of designer Ellis.

Old perceptions, good and bad, may be hard to change, but as IBM and others have discovered, the mold is breakable. Reputations are built on first-class management, along with high-quality products and services —the two attributes that respondents consistently consider the strongest components of a corporate image. But companies are only as strong as their latest balance sheets. Once they slip, how easy is it to climb back up the reputation ladder? "Glass, china, and reputation, are easily crack'd and never well mended," Benjamin Franklin said. The LTVs and Manvilles of corporate America would like to prove him wrong.



Biggest gainers

COMPANY	SCORE	CHANGE
H.F. Ahmanson	7.20	+1.46
Great Western Financial	7.34	+1.44
J.P. Stevens	6.07	+1.36
Fieldcrest Cannon	6.35	+.79
Digital Equipment	7.75	+.78
Ogden	6.92	+.76
GenCorp	6.28	+.68
Reynolds Metals	6.27	+.64
First Chicago	5.26	+.60
Kellwood	5.92	+.59

Biggest losers

COMPANY	SCORE	CHANGE
Mattel	5.58	−1.22
Mack Trucks	5.19	−1.17
General Motors	6.56	−1.06
Coleco Industries	4.70	−1.04
Fruehauf	4.78	−.90
FMC	5.27	−.85
BankAmerica	3.28	−.81
General Signal	5.68	−.77
Owens-Corning Fiberglas	5.76	[illegible]
[illegible] Grace	4.95	[illegible]

Changes in Score

Higher profits helped boost H.F. Ahmanson and Great Western Financial, both California S&Ls, by nearly a point and a half. Biggest loser Mattel hasn't had a hit new toy in a while.

HOW COMPANIES RANK IN 33 INDUSTRIES

Industry groups are based on U.S. Office of Management and Budget categories. Companies are assigned to industries according to the business that contributed most to 1985 sales.

Aerospace

Boeing leads in every attribute, but Martin Marietta rocketed up three places after a restructuring.

RANK	LAST YEAR	COMPANY	SCORE
1	1	Boeing	7.99
2	5	Martin Marietta	7.07
3	2	Rockwell International	6.87
4	3	Lockheed	6.76
5	7[1]	Northrop	6.75
6	4	McDonnell Douglas	6.69
7	7[1]	United Technologies	6.38
8	9	General Dynamics	6.29
9	10	Textron	6.03
10	–	Allied-Signal[2]	5.92

Beverages

Coca-Cola rates spritziest in product quality, financial soundness, investment value, and two other categories.

RANK	LAST YEAR	COMPANY	SCORE
1	1	Coca-Cola	7.80
2	3	PepsiCo[4]	7.52
3	2	Anheuser-Busch	7.50
4	4	General Cinema	6.32
5	7	Joseph E. Seagram & Sons	6.03
6	9	Adolph Coors	5.91
7	6	Brown-Forman	5.75
8	8	G. Heileman Brewing	5.49

Apparel

Liz Claiborne and Manhattan Industries join the list for the first time. Claiborne is No. 2 overall.

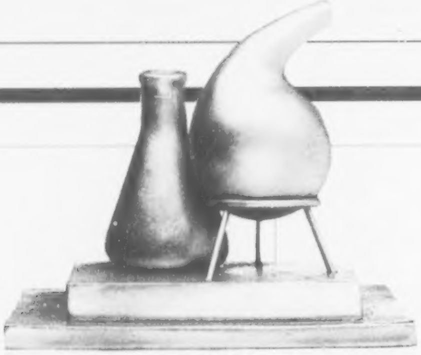
RANK	LAST YEAR	COMPANY	SCORE
1	–	Liz Claiborne[3]	8.02
2	1	VF	7.50
3	2	Hartmarx	6.72
4	3	Interco	6.31
5	9	Kellwood	5.92
6	5	Oxford Industries	5.89
7	8	Phillips-Van Heusen	5.69
8	–	Manhattan Industries[3]	4.30

[1] Tie. Each scored higher than the other last year on four of eight attributes.

[2] Ranked No. 3 last year in the chemicals category. Acquired Signal Cos., ranked No. 6 last year in the aerospace category.

[3] Not ranked last year.

[4] Acquired MEI Corp., ranked No. 5 last year in the beverages category.



Chemicals

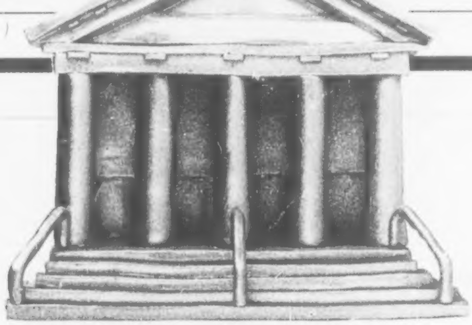
Dow is No. 1 in management quality and use of corporate assets, but Du Pont is tops in the other six attributes.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Du Pont**	7.41
2	2	**Dow Chemical**	6.93
3	5	**Monsanto**	6.40
4	4	**Hercules**	6.26
5	7	**Celanese**	6.20
6	6	**American Cyanamid**	6.17
7	–	**BASF**[1]	6.05
8	8	**FMC**	5.27
9	9	**W.R. Grace**	4.94
10	10	**Union Carbide**	4.16

Diversified financial

American Express is No. 1 or No. 2 in every category; E.F. Hutton, bruised by legal problems, ranks last in seven.

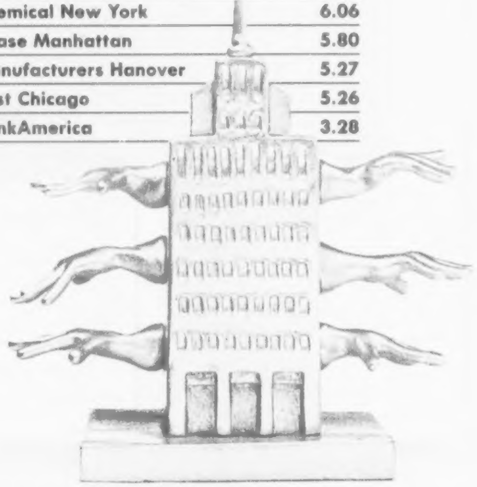
RANK	LAST YEAR	COMPANY	SCORE
1	2	**American Express**	7.27
2	1	**First Boston**	7.15
3	–	**Loews**[1]	6.50
4	–	**Bear Stearns**[1]	6.36
5	3	**Merrill Lynch**	6.33
6	5	**Aetna Life & Casualty**	6.18
7	4	**Travelers Corp.**	6.04
8	9	**Federal National Mortgage Assn.**	5.64
9	6	**Cigna**	5.42
10	–	**E.F. Hutton**[1]	4.81



Commercial banking

J.P. Morgan leads in six categories; BankAmerica is No. 10 except in responsibility, where it's eighth.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**J.P. Morgan**	7.95
2	2	**Citicorp**	7.26
3	3	**Bankers Trust New York**	7.05
4	4	**Security Pacific**	6.83
5	5	**First Interstate Bancorp**	6.14
6	6	**Chemical New York**	6.06
7	7	**Chase Manhattan**	5.80
8	8	**Manufacturers Hanover**	5.27
9	9	**First Chicago**	5.26
10	10	**BankAmerica**	3.28



Diversified service

The Tisch takeover could change CBS's scores—especially in management, one of five areas where it's No. 10.

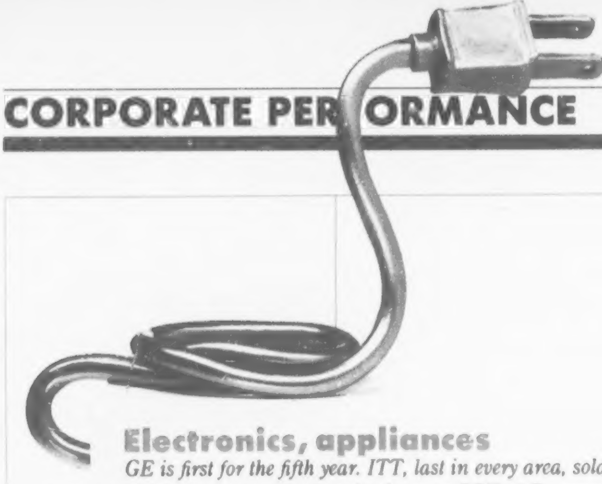
RANK	LAST YEAR	COMPANY	SCORE
1	1	**Salomon**[2]	7.09
2	2	**Super Valu Stores**	6.48
3	–	**Hospital Corp. of America**[1]	6.32
4	4	**McKesson**	6.27
5	3	**Fleming**	6.11
6	–	**Union Pacific**[3]	5.96
7	8	**Enron**[4]	5.74
8	7	**Halliburton**	5.71
9	9	**Fluor**	5.55
10	6	**CBS**	5.20

[1] Not ranked last year.

[2] Formerly Phibro-Salomon.

[3] Ranked No. 5 last year in the transportation category.

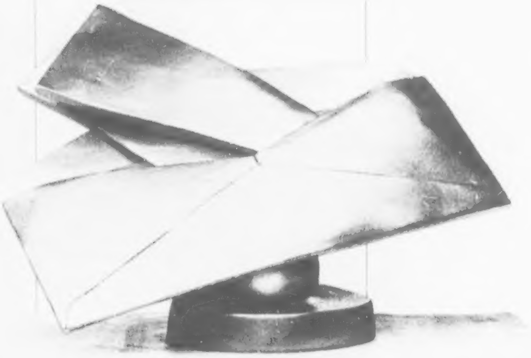
[4] Formerly HNG/InterNorth.



Electronics, appliances

GE is first for the fifth year. ITT, last in every area, sold most of its telecommunications business to CGE of France.

RANK	LAST YEAR	COMPANY	SCORE
1	1	General Electric[1]	7.61
2	2	Emerson Electric	7.08
3	4	Motorola	6.81
4	3	AT&T	6.62
5	–	TRW[2]	6.40
6	5	Raytheon	6.36
7	6	Westinghouse Electric	6.10
8	9	Texas Instruments	5.89
9	8	Litton Industries	5.48
10	10	ITT	5.08



Forest products

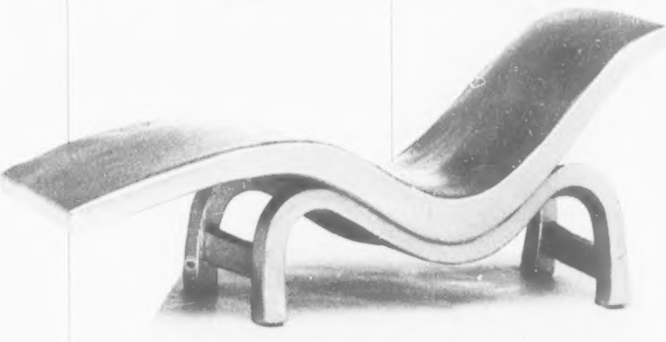
Kimberly-Clark leads in half the categories. James River, tops in three, bought last year's industry loser, Crown Zellerbach.

RANK	LAST YEAR	COMPANY	SCORE
1	1	Kimberly-Clark	7.25
2	2	James River Corp. of Virginia	6.73
3	4	Scott Paper	6.35
4	3	Mead	6.00
5	6	Georgia-Pacific	5.89
6	–	Great Northern Nekoosa[3]	5.83
7	7	Boise Cascade	5.73
8	5	Weyerhaeuser	5.66
9	8	Champion International	5.29
10	9	International Paper	4.98

Food

Nobody still doesn't like Sara Lee, No. 1 now that last year's leader, Nabisco, has been merged into RJR.

RANK	LAST YEAR	COMPANY	SCORE
1	2	Sara Lee	7.29
2	–	Pillsbury[3]	7.25
3	3	General Mills	7.20
4	6	Ralston Purina	7.04
5	3	Dart & Kraft[4]	6.93
6	–	ConAgra[3]	6.91
7	8	Borden	6.32
8	7	Archer Daniels Midland	6.29
9	9	CPC International	6.06
10	–	IC Industries[3]	6.02



Furniture

The industry, new to the survey, polished its way to a median score of 7.54, highest of all 33 groups.

RANK	LAST YEAR[5]	COMPANY	SCORE
1	–	Herman Miller	7.84
2	–	Leggett & Platt	7.72
3	–	Hon Industries	7.35
4	–	Mohasco	6.34

[1] Acquired RCA in June 1986.

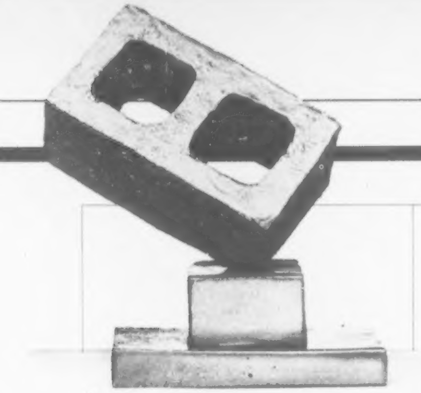
[2] Ranked No. 5 last year in the motor vehicles and parts category.

[3] Not ranked last year.

[4] Company split into Kraft Inc. and Premark International in October 1986.

[5] This industry was not surveyed last year.

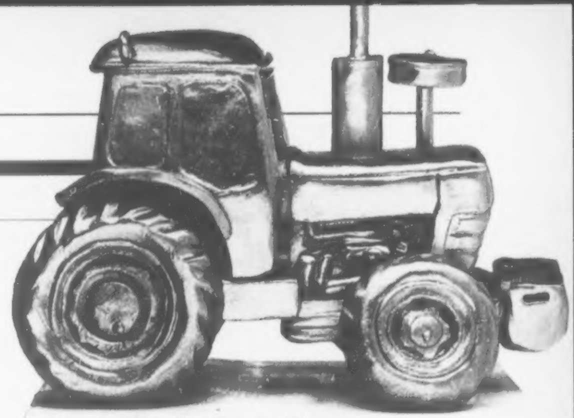
HOW COMPANIES RANK IN 33 INDUSTRIES



Glass, building materials

What's in a name? Libbey-Owens-Ford turned into Trinova and jumped three places up the list.

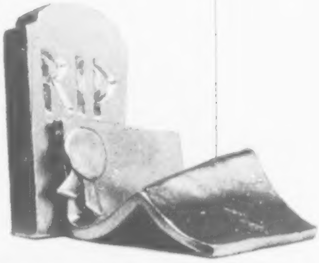
RANK	LAST YEAR	COMPANY	SCORE
1	1	**Corning Glass Works**	7.05
2	2	**PPG Industries**	6.77
3	4	**Owens-Illinois**	6.36
4	5	**USG**	6.26
5	8	**Trinova**[1]	6.00
6	3	**Owens-Corning Fiberglas**	5.78
7	6	**Norton**	5.76
8	–	**Jim Walter**[2]	5.72
9	7	**National Gypsum**	5.42
10	10	**Manville**	3.64



Industrial and farm equipment

Caterpillar ranks first in quality of its products. Cummins and Teledyne lead in three areas each.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Cummins Engine**	6.98
2	3	**Teledyne**	6.89
3	–	**Black & Decker**[2]	6.77
4	6	**Caterpillar**[3]	6.71
5	2	**Deere**	6.46
6	–	**American Standard**[4]	6.35
7	8	**Ingersoll-Rand**	6.27
8	7	**Combustion Engineering**	6.13
9	6	**Dresser Industries**	5.98
10	9	**Baker International**	5.74



Life insurance

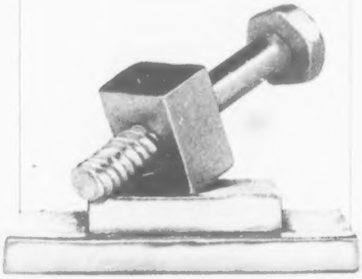
Northwestern Mutual is No. 1 in everything but community and environmental responsibility, where the Rock is at the top.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Northwestern Mutual**	7.19
2	2	**Prudential**	6.57
3	4	**Teachers Insurance & Annuity**	6.37
4	9	**Aetna Life**	6.21
5	3	**Travelers**	6.15
6	5	**Metropolitan Life**	6.10
7	6	**Connecticut General Life**	6.07
8	10	**New York Life**	6.04
9	7	**John Hancock Mutual**	5.98
10	8	**Equitable Life Assurance**	5.85

Metals

Alcoa has been No. 1 since 1983. Overall the industry scores lowest in the survey, with a median of 5.22.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Alcoa**	6.44
2	2	**Reynolds Metals**	6.27
3	5	**Marmon Group**	5.79
4	–	**Penn Central**[2]	5.52
5	–	**Farley/Northwest Industries**[2]	5.46
6	4	**Inland Steel**	4.97
7	7	**Kaiser Aluminum & Chemical**	4.69
8	8	**Armco**	4.58
9	9	**Bethlehem Steel**	3.69
10	10	**LTV**	3.11



Metal products

It was a close shave, but Gillette fended off invader Revlon and kept first place without a nick in sight.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Gillette**	7.00
2	3	**Stanley Works**	6.95
3	2	**Masco**	6.71
4	4	**Parker Hannifin**	6.38
5	6	**American Can**	6.31
6	–	**Emhart**[5]	6.28
7	7	**Crown Cork & Seal**	6.24
8	8	**Harsco**	5.99
9	9	**CBI Industries**	5.93
10	–	**Triangle Industries**[2]	5.73

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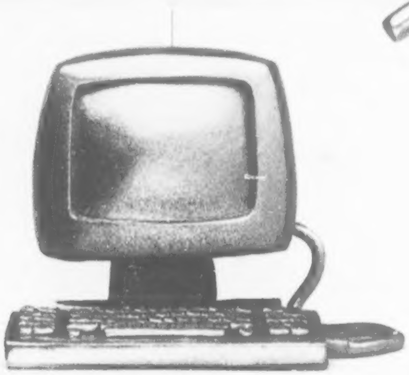
[1] Formerly Libbey-Owens-Ford
[2] Not ranked last year
[3] Formerly Caterpillar Tractor
[4] Ranked No. 1 last year in the shipbuilding, railroad and transportation equipment category.
[5] Ranked No. 5 last year in the industrial and farm equipment category.

Mining, crude-oil production

In a weak industry, Ohio's Standard Oil finished first in five of the eight categories. Amax was at the bottom in six.

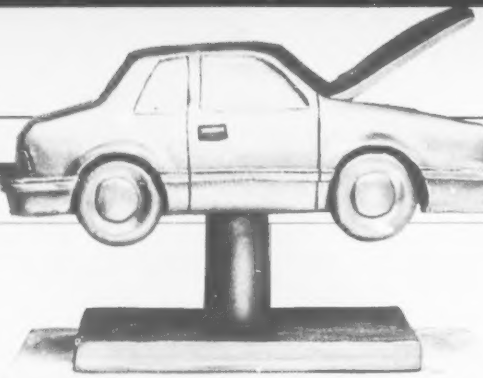
RANK	LAST YEAR	COMPANY	SCORE
1	1	Standard Oil	6.42
2	3	Vulcan Materials	6.14
3	4	Freeport-McMoRan	5.91
4	2	Mitchell Energy & Development	5.85
5	5[1]	International Minerals & Chemical	5.67
6	5[1]	Louisiana Land & Exploration	5.54
7	7	Occidental Petroleum	5.40
8	8	Westmoreland Coal	5.26
9	9	Inspiration Resources	4.77
10	10	Amax	4.41



Office equipment, computers

Digital leads in quality of products and services, and Apple in innovativeness. Otherwise, IBM is No. 1.

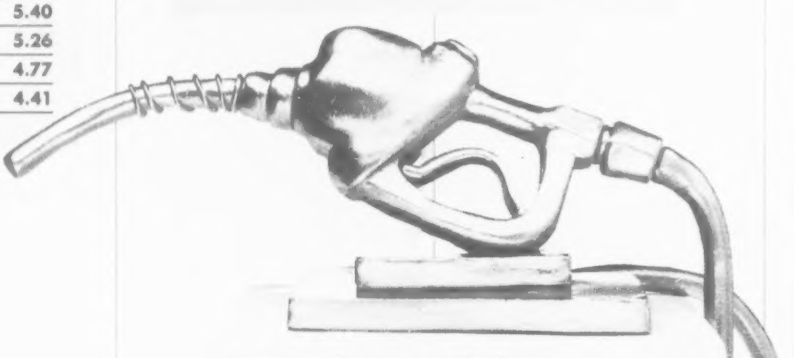
RANK	LAST YEAR	COMPANY	SCORE
1	1	IBM	7.91
2	3	Digital Equipment	7.75
3	2	Hewlett-Packard	7.58
4	–	Apple Computer[4]	6.83
5	4	NCR	6.18
6	8	Pitney Bowes	5.67
7	5	Wang Laboratories	5.59
8	6	Honeywell	5.47
9	7	Burroughs[5]	5.31
10	10	Control Data	4.34



Motor vehicles and parts

Fueled by the success of its Taurus and Sable models, Ford lapped GM, which fell back three places.

RANK	LAST YEAR	COMPANY	SCORE
1	2	Ford Motor	7.26
2	3	Chrysler	6.94
3	4	Dana	6.65
4	1	General Motors	6.56
5	6	Paccar	6.17
6	7	Borg-Warner	6.07
7	–	Mack Trucks[2]	5.19
8	8	Fruehauf	4.78
9	9	Navistar International[3]	4.72
10	10	American Motors	3.45



Petroleum refining

Despite falling oil prices, Exxon's 9.23 ranking for financial soundness is the highest in the survey.

RANK	LAST YEAR	COMPANY	SCORE
1	–	Shell[4]	7.91
2	1	Exxon	7.80
3	2	Amoco	7.61
4	4	Chevron	6.67
5	3	Atlantic Richfield	6.34
6	6	Mobil	6.28
7	7	Tenneco	5.70
8	8	Texaco	5.06
9	9	Philips Petroleum	5.01
10	10	USX[6]	4.50

[1] Tie. Each scored higher than the other last year on four of eight attributes.

[2] Ranked No. 3 last year in the shipbuilding, railroad and transportation equipment category.

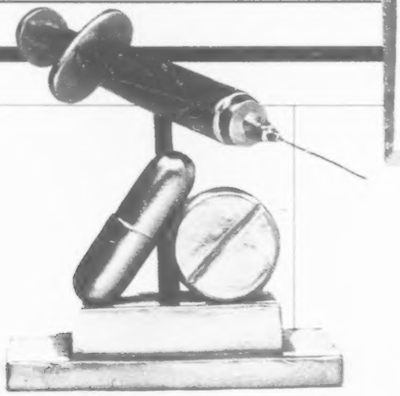
[3] Formerly International Harvester.

[4] Not ranked last year.

[5] Merged with Sperry in September 1986; name changed to Unisys Corp. in November 1986.

[6] Formerly U.S. Steel.

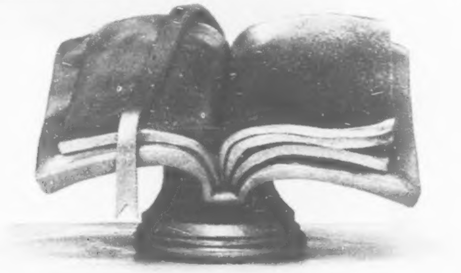
HOW COMPANIES RANK IN 33 INDUSTRIES



Pharmaceuticals

With Merck and Johnson & Johnson in the top ten overall, the industry has one of the best median scores.

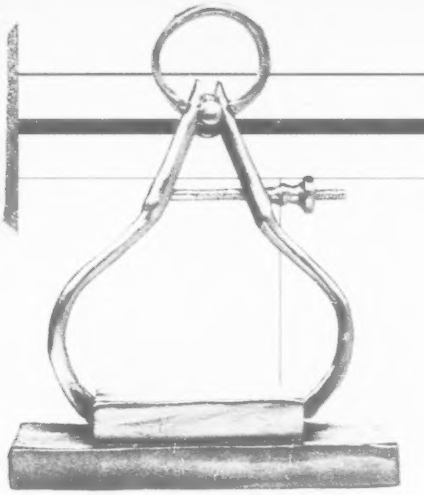
RANK	LAST YEAR	COMPANY	SCORE
1	1	Merck	8.38
2	2	Johnson & Johnson	7.86
3	5	Abbott Laboratories	7.47
4	6	Eli Lilly	7.36
5	3	Pfizer	7.35
6	4	Bristol-Myers	7.21
7	7	American Home Products	6.88
8	9	SmithKline Beckman	6.35
9	–	Baxter Travenol[1]	6.07
10	10	Warner-Lambert	6.00



Publishing, printing

For innovation Gannett is second among 300 companies, but in product quality it's No. 10 in its group.

RANK	LAST YEAR	COMPANY	SCORE
1	1	Dow Jones	7.84
2	2	New York Times	7.80
3	3	Gannett	7.22
4	6	Knight-Ridder[2]	7.08
5	7	Washington Post	7.01
6	5	R.R. Donnelley & Sons	6.97
7	8	Times Mirror	6.88
8	4	Time Inc.	6.74
9	9	McGraw-Hill	6.56
10	10	Tribune	6.55



Precision instruments

3M and Kodak tie for best product quality. 3M leads outright in six areas; meanwhile, Kodak is tops in responsibility.

RANK	LAST YEAR	COMPANY	SCORE
1	1	3M	7.69
2	2	Eastman Kodak	6.94
3	3	EG&G	6.70
4	4	Perkin-Elmer	6.64
5	8	Becton Dickinson	6.41
6	6	Xerox	6.40
7	9	Polaroid	6.37
8	5	Tektronix	6.12
9	7	General Signal	5.68
10	10	Lear Siegler	5.64

Retailing

Dayton Hudson, which is selling B. Dalton Bookseller to Barnes & Noble, is tops in all eight components of reputation.

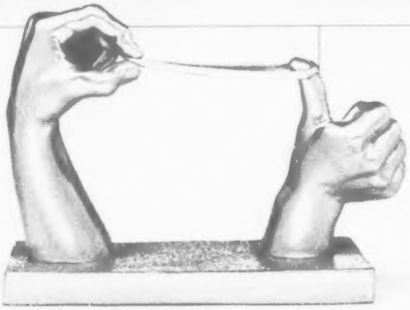
RANK	LAST YEAR	COMPANY	SCORE
1	–	Dayton Hudson[1]	7.25
2	1	Sears Roebuck	6.44
3	3	Kroger	6.35
4	6	J.C. Penney	6.34
5	4	Federated Department Stores	6.21
6	8	K mart	5.98
7	9	Southland	5.96
8	2	American Stores	5.87
9	7	Lucky Stores	5.24

[1] Not ranked last year

[2] Formerly Knight-Ridder Newspapers

CORPORATE PERFORMANCE

HOW COMPANIES RANK IN 33 INDUSTRIES



Rubber and plastic products

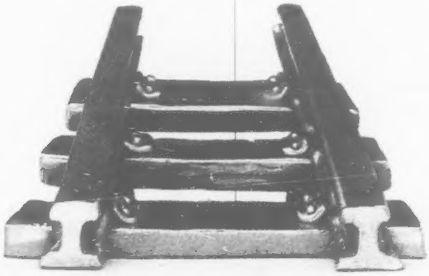
Rubbermaid—which makes mainly plastic products—leads, except for responsibility, where it's No. 2.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Rubbermaid**	7.94
2	2	**Goodyear Tire & Rubber**	7.13
3	6	**GenCorp**	6.28
4	4	**Cooper Tire & Rubber**[1]	6.03
5	3	**Carlisle**[1]	6.03
6	5	**Armstrong Rubber**	5.72
7	8	**Firestone Tire & Rubber**	5.45
8	10	**B.F. Goodrich**	5.44
9	–	**Dorsey**[2]	5.31
10	7	**Dayco**	5.23

Savings institutions

In this newly created industry group, Financial Corp. of America ranks at the bottom. It's plagued by problem loans.

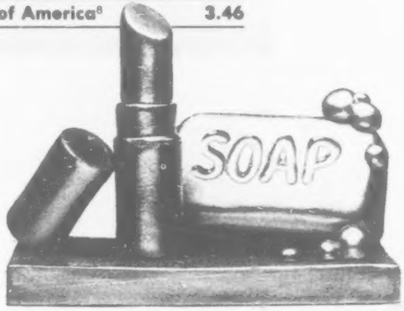
RANK	LAST YEAR[3]	COMPANY	SCORE
1	–	**Great Western Financial**[4]	7.34
2	–	**H.F. Ahmanson**[5]	7.20
3	–	**Home Federal Savings & Loan**	6.72
4	–	**Golden West Financial**	6.54
5	–	**Calfed**	6.39
6	–	**Glenfed**[6]	6.08
7	–	**First Federal of Michigan**	5.44
8	–	**Meritor Savings Bank**[7]	5.17
9	–	**Gibraltar Financial**	5.01
10	–	**Financial Corp. of America**[8]	3.46



Shipbuilding, railroad and transportation equipment

With last year's champ American Standard ranked elsewhere, Fleetwood now rolls into the top spot.

RANK	LAST YEAR	COMPANY	SCORE
1	2	**Fleetwood Enterprises**	7.22
2	4	**Ogden**	6.92
3	–	**Winnebago Industries**[2]	6.79
4	6	**Todd Shipyards**	6.13



Soaps, cosmetics

P&G is No. 1 in every trait. Revlon, taken over by new Chairman Ronald Perelman, ranks last except for innovativeness.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Procter & Gamble**	7.69
2	4	**Lever Brothers**	6.67
3	3	**Clorox**	6.56
4	2	**International Flavors & Fragrances**	6.53
5	6	**Colgate-Palmolive**	6.35
6	7	**Chesebrough-Pond's**	6.18
7	8	**Avon Products**	5.89
8	5	**Economics Laboratory**	5.86
9	9	**Revlon**	5.04

[1] Cooper Tire & Rubber scores higher in five of eight attributes.

[2] Not ranked last year.

[3] This industry was not surveyed last year.

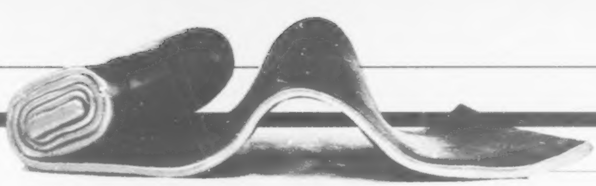
[4] Ranked No. 7 last year in the diversified financial category.

[5] Ranked No. 8 last year in the diversified financial category.

[6] Formerly Glendale Federal Savings & Loan Association.

[7] Formerly Philadelphia Savings Fund Society.

[8] Ranked No. 10 last year in the diversified financial category.



Textiles, vinyl flooring

Since the survey was completed, No. 1 Collins & Aikman has agreed to a takeover by Wickes.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Collins & Aikman**	**7.67**
2	3	**West Point-Pepperell**[1]	**7.37**
3	2	**Armstrong World Industries**	**7.19**
4	4	**Springs Industries**[2]	**7.03**
5	5	**Shaw Industries**	**6.86**
6	8	**Fieldcrest Cannon**[3]	**6.35**
7	9	**J.P. Stevens**	**6.07**
8	6	**Burlington Industries**	**6.06**
9	–	**DWG**[4]	**5.86**
10	10	**United Merchants & Mfrs.**	**4.81**

Transportation

UPS delivers a No. 1 ranking in six attributes. AMR is the most innovative. Delta the most responsible.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**United Parcel Service**	**7.33**
2	3	**AMR (American Airlines)**	**7.06**
3	2	**Delta Air Lines**	**6.91**
4	–	**Norfolk Southern**[4]	**6.67**
5	6	**UAL (United Airlines)**	**6.44**
6	7	**CSX**	**6.20**
7	4	**Burlington Northern**	**6.17**
8	8	**Santa Fe Southern Pacific**	**5.61**
9	–	**Trans World Airlines**[4]	**4.31**
10	10	**Pan Am**	**3.73**

Toys, sporting goods, musical instruments

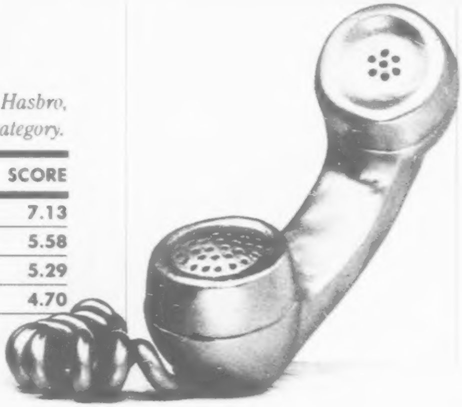
Mattel leads the list of biggest point losers. Hasbro, maker of the G.I. Joe doll, is No. 1 in every category.

RANK	LAST YEAR	COMPANY	SCORE
1	1	**Hasbro**	**7.13**
2	2	**Mattel**	**5.58**
3	–	**Minstar**[4]	**5.29**
4	4	**Coleco Industries**	**4.70**

Tobacco

R.J. Reynolds and Nabisco joined forces and pushed Philip Morris into second place.

RANK	LAST YEAR	COMPANY	SCORE
1	2	**RJR Nabisco**[5]	**7.80**
2	1	**Philip Morris**	**7.70**
3	3	**United States Tobacco**	**6.15**
4	4	**American Brands**	**6.14**



Utilities

Innovativeness goes to US West, but the pride of Ma Bell's offspring is BellSouth, first in the other seven attributes.

RANK	LAST YEAR	COMPANY	SCORE
1	2	**BellSouth**	**7.37**
2	3	**Bell Atlantic**	**7.33**
3	1	**Ameritech**	**7.20**
4	4	**Pacific Telesis Group**	**7.01**
5	7	**Nynex**	**6.93**
6	5	**US West**	**6.90**
7	6	**Southwestern Bell**	**6.76**
8	8	**Pacific Gas & Electric**	**6.62**
9	9	**Southern**	**6.42**
10	10	**GTE**	**6.28**

[1] Acquired Cluett Peabody, which was tied last year at No. 5 with Oxford Industries in the apparel category.

[2] Acquired M. Lowenstein, ranked No. 7 last year in the textiles, vinyl flooring category.

[3] Formerly Fieldcrest Mills.

[4] Not ranked last year.

[5] Acquired Nabisco Brands, ranked No. 1 last year in the food category.

ARE SHAREHOLDERS CHEATED BY LBOs?

Companies taken private by their own managers a couple of years ago are being sold to the public again, at prices two or three times what the stockholders were paid. The company's executives pocket a lot of the difference. Is something fishy going on here?

■ *by Gary Hector*

SECURITY ANALYSTS shuddered when Beatrice Cos. went private early last year. The largest leveraged buyout ever, with a $6.2-billion price tag and $6.1 billion of ulcer-inducing debt, the deal looked like a disaster in the making. Yet in just eight months Beatrice's chief executive, Donald Kelly, has unloaded $6 billion of unwanted businesses and shed nearly $5 billion of debt. Unless the stock market falls apart, Kelly plans to take Beatrice public again in 1987, which could net him more than $400 million personally on an initial investment of $5 million. "This one," says an admiring lender, "will go down in history."

He'll Make $400 Million

Donald Kelly led the $6.2-billion buyout of Beatrice in 1986. He has sold lots of assets, and is now expected to take the company public again.

It is also fueling a debate about whether an LBO like this one is fair to the shareholders. Sure, they collect a fat premium over the going market price when they sell their shares. But do they really get top dollar?

You remember the basic drill on how an LBO works: A group of smart investors, often including the company's management, borrows heaps of money and buys the company. In Beatrice's case, the group included not company insiders but outsiders who *used* to be insiders. Kelly and friends, a legendarily shrewd group of marketers and dealmakers, had run Esmark before it was acquired by Beatrice in 1985. They teamed up with the LBO firm of Kohlberg Kravis & Roberts, which put the deal together and raised the money. Now comes the punch line: A miraculously short time later the company has more than doubled in value, and the value of management's stake has increased 50-fold.

What's going on here? Proponents of management buyouts argue that the discipline imposed by a huge debt and the bliss of being private transform ordinary executives into supermen who work wonders on their organizations. Once a firm goes private, explains Alan Rappaport, a specialist in mergers and acquisitions at Northwestern University's Kellogg School of Management and a consultant, "You are no longer dealing with the same culture. The economic incentives are much more compelling; there is a much higher energy level, a much greater devotion to efficiency and risk-taking."

But the evidence emerging from recent LBOs suggests an alternative explanation. What appears to make buyouts successful is the ability of insiders—or well-informed outsiders like Donald Kelly—to pay rock-bottom prices to take companies private. Unlike the market for a few hundred shares of common stock, the market for control of public corporations seems to be surprisingly inefficient, at least to judge from the astonishingly different amounts the corporate assets command going into and coming out of a buyout.

The critics of LBOs argue that neither the board of directors, the investment bankers helping them out, nor the managers themselves have strong enough incentives to protect shareholders. Indeed, the potential conflicts of interest are so disquieting that a few chief executives are embracing a new financing alternative known as the leveraged cashout. In a cashout the shareholders get not only money up front, but also some stock in the lean-and-mean new company. Some recent cashouts: FMC, Colt Industries, and Holiday Corp.

THE CENTRAL ISSUE in the unfolding debate is the proper relationship between management and shareholders. We all know the theory about how this relationship works: Management acts as an agent for the shareholder, making day-to-day decisions in the shareholders' interests. But when the managers begin cobbling together a tender offer for the company they run, they and the shareholders become opposing parties in a negotiation. The guardian angel in this process is the board of directors, whose duty is to ensure that shareholders don't get roughed up by their management. In practice, critics say, the angel has no wings.

Sure, the critics concede, interest rates have dropped, and yes, the management is better motivated. But can that explain

REPORTER ASSOCIATE *Margaret A. Elliott*

He Will Collect $3 Billion

Metromedia's John Kluge, 71, shown here with third wife Pat, in her early 40s, has reason to beam. After taking Metromedia private in 1984, he managed to sell off its component businesses for much more than he paid for them. When completed, his dealmaking could net him close to $3 billion.

changes in value like the following: Metromedia Inc., which went private in 1984 for $1.1 billion, is in the midst of a liquidation that has already raised five times that sum. Uniroyal Inc., which went private in April 1985 for $900 million, is in the process of selling off its businesses and seems likely to receive at least $1.4 billion. SFN Inc., a publisher of textbooks taken private for $450 million in early 1985, recently announced plans for a liquidation that will net it close to $1.1 billion. Equally big gains have accrued to owners of smaller companies that have made the round trip, such as Motel 6, Colton Corp., Edgcomb Steel, and Blue Bell Inc.

The money that top executives at these companies make on the deals propels them to the outer limits of the known universe for executive compensation. John Kluge, chief executive of Metromedia, made an estimated $3 *billion* through the liquidation of the company. John Pomerantz, chairman of dressmaker Leslie Fay, which went private in an LBO and then changed hands again in a second LBO, netted $60 million in four years on an initial investment of less than $1 million. Joseph Flannery, chairman of Uniroyal, expects to earn $20 million on an investment of less than $750,000 a year ago. John Purcell, SFN's top executive, made at least $25 million in 18 months on an investment of less than $500,000.

IT'S ENOUGH to raise a few eyebrows. Why, the critics ask, does management have to take a company private before it can work up the moxie to do all those things that improve the corporate prospects so dramatically? "There is something questionable about taking companies private and then, within a relatively short period of time, bringing them public at a substantial increase in value," worries A. A. Sommer, a former member of the SEC. "It would suggest that the public shareholders did not get full value."

LBOs still have staunch defenders. They argue that buyouts, unlike insider trading, occur in the sunshine. Shareholders are told of the deals weeks in advance, vote on the transactions, and collect a big profit by selling out. Buyers must disclose their intentions in proxy statements, the board of directors must bless the deal, and takeover artists may step in and bid on the company, turning the sale into a public auction. "The market for buying and selling companies is pretty efficient," maintains Fred Eckert, a partner at Goldman Sachs. "Nobody does leveraged buyouts over a Saturday night antimeter. Any-

He Made $60 Million

John Pomerantz did an LBO in 1982 on Leslie Fay, the apparel company his father founded, then brought it public again in 1986. Buyout price: $58 million; sale price on going public: $360 million.

body who has the money can make a bid."

Critics say that in the real world these protections are meaningless. Once a company is "in play," most shareholders take their money and run. The people who then own the stock, the arbitragers, operate on thin margins and must turn over their inventory rapidly to realize a profit—in much the same way an efficient supermarket must do.

AND CONSIDER the plight of the board. Directors have a fiduciary responsibility to allow shareholders to vote on any bid that substantially exceeds the current market price, even if the board thinks the bid is well below the firm's potential value. Those savvy investment bankers, supposedly so adept at valuing a company, invariably bless their client's bid with a lengthy document explaining why the bid is a "fair" market price—if not indeed egregiously generous. In one bidding war, for Stokely Van Camp, three different investment advisers provided "fairness" letters to three different prospective buyers at prices ranging from $50 to $75 a share.

When management buys the company, the critics of this movement charge, the bosses know more about the intrinsic value than either the shareholders or the investment bankers. Consider Metromedia. One of the first big leveraged buyouts, Metromedia went private in mid-1984 at the then unprecedented price for an LBO of $1.1 billion. Prospects for its broadcast and cellular radio businesses looked mediocre. The company had been criticized for sloppy accounting practices, which had driven its stock price to a six-year low. John Kluge, Metromedia's chairman and controlling shareholder, decided that the low price left his company vulnerable to raiders, so he took it private, in the process increasing his ownership from around 25% of the company to 93%. In making the deal, he got fairness opinions from Lehman Brothers and Bear Stearns; neither could round up even one competitive bidder. Within months circumstances showed just how risky the deal might prove to be if Kluge was wrong. Metromedia missed a payment on its debt and was forced to refinance. "I really thought this was going to be the one that hit the fan," says a banker who specializes in lending on LBOs.

In retrospect, Kluge knew what he was doing. He decided to dismantle his company and dispose of it piece by piece. He sold seven television stations for $2 billion and found buyers for a radio station, the Harlem Globetrotters, the Ice Capades, and finally for the seemingly doggy cellular radio operation, which fetched $1.1 billion. In all, Kluge has made $5.5 billion by dismantling Metromedia—a fivefold increase in just two years. Everybody admits belatedly that Kluge is some sort of business genius. He sold his TV stations at the peak and nursed along his cellular operations until telephone companies began snapping them up for unheard-of prices. But how much is genius worth? *$3 billion?* And how much of this prescience did he impart to his shareholders?

Or take a smaller example: the management buyout of Fred Meyer Inc., a Portland, Oregon, retailer. Fred Meyer is a regional version of K mart, a blue-collar retailer with an array of large stores throughout the Pacific Northwest. The chain was built almost single-handedly by Fred Meyer and his family and was closely controlled until 1978, when Meyer died at age 92. Two years later a group of the company's executives, together with Kohlberg Kravis & Roberts, took Fred Meyer private in a transaction that Jerome Kohlberg later described as one of the most complicated he'd ever attempted. The price: $420 million, or $55 a share.

What made Fred Meyer tantalizing was the company's real estate, carried on the books at cost and rented by the company on long-term sweetheart leases from firms jointly owned by the company and the Meyer family. The value of the property was at least $110 million to $160 million more than the

He Made $25 Million

SFN's John Purcell took the company private over protests from the founding families. Within a year its assets doubled in value.

price on the Fred Meyer balance sheet.

Pretrial testimony in a suit brought by the Meyer family since the buyout suggests that Fred Meyer's board never understood the transaction they approved. A special committee of the board, composed of three outside directors (two others were appointed but never attended the meetings), met three times, devoting about six hours to reviewing the proposal. The committee never hired its own advisers. It relied on management's law firm and investment bankers, even though management wound up owning a stake of 10% in the private company. At least two other outfits had expressed an interest in buying Fred Meyer, one of which, a French retailer, had proposed a price $2 a share higher than the KKR bid. Yet the committee never sought other bidders or encouraged management to talk with potential buyers from outside. Even worse, despite a caution by Earle A. Chiles, a board member and Fred Meyer's stepson, the board never obtained an independent appraisal of the value of the company's real estate.

Minutes of the meeting at which the board accepted the KKR bid show that Martin Siegel, then a Kidder Peabody partner and the buyout group's investment banker, told the board that the offer was fair, but "at the low end of the range of fairness." This qualifying observation was never revealed in any material sent to shareholders.

The actual value of Fred Meyer, according to estimates later done for Chiles by James Reinmuth, dean of the school of business at the University of Oregon, was around $70 a share. Even Reinmuth's estimate may have been low. When Fred Meyer went public again this summer, the company's value had increased to more than $900 million, or over $[illegible] a share.

Or consider the more recent leveraged buyout of SFN Inc. of Glenview, Illinois. John [illegible], chairman of SFN, took the company private in 1985. [illegible]'s bid was opposed by three directors, representing the Scott and Foresman families, which had founded SFN. They hired an outside investment banker, Smith Barney Harris Upham & Co., and argued at board meetings that the directors should solicit other bids for the company to obtain the highest possible price. The board chose instead to consider [illegible]'s offer, which stipulated that the company could not seek another buyer while negotiating with [illegible]. The terms were later amended to allow the board to talk with [illegible] Corp., which had expressed an interest in the company but then chose to join [illegible]'s investor group, apparently recognizing a good deal when it saw one.

SFN's board did a careful job of examining the [illegible] group's proposal, but by agreeing to consider just one bid, abandoned the chance of an auction. A special committee reviewed the offer with the help of two investment banking firms, which accepted the [illegible] with some [illegible]. But their fairness opinions noted that they never were [illegible] for other buyers or sought bidders for portions of the company. This oversight occurred despite the fact that [illegible], Time Inc., publishers of FORTUNE, and [illegible] had expressed an interest in buying SFN or pieces of it.

A[illegible] they [illegible] to get control of the company, [illegible] and [illegible] sold off the pieces for more than the buyout group paid to take it private. The largest piece, Scott Foresman Publishing, was acquired by Time Inc. for $[illegible] million.

Members of the Scott and Foresman families refused to discuss the buyout, saying that they are still so angry that the [illegible] might be considered slanderous. One of the other directors who approved the deal publicly rues the decision. "This is a very sore subject with me," says [illegible], an SFN board member who was on the committee that negotiated a final price with [illegible]. "I thought this was the best transaction [illegible] at the time. The [illegible] [illegible]." [illegible] proved the board members right. ◆

Miraculous Changes in Market Value

COMPANY	LBO PRICE DATE	VALUE WHEN TAKEN PUBLIC OR SOLD	PERCENTAGE INCREASE
BEATRICE	$6.2 billion 4/86	$[illegible] billion (est.) Assets sold: Avis for $1.6 billion; Coke bottling unit for $1 billion; 80% of International Playtex for $1.25 billion; other businesses for $[illegible] billion.	[illegible]%
BLUE BELL	$[illegible] million 11/84	$[illegible] million Sold to VF Corp. for $[illegible] million in cash and stock plus assumption of $[illegible] million in long-term debt.	[illegible]%
DR PEPPER	$[illegible] million 2/84	$[illegible] million Assets sold: Canada Dry for $[illegible] million; bottling plants and other businesses sold for $[illegible] million; Dr Pepper sold for $[illegible] million.	[illegible]%
[illegible]	$[illegible] million [illegible]	$[illegible] million Taken public again [illegible]	[illegible]%
LILY TULIP	$[illegible] million [illegible]	$[illegible] million Sold to Fort Howard [illegible]	[illegible]%
METROMEDIA	$1.1 billion 6/84	$[illegible] billion (est.) Assets sold: seven TV stations for $[illegible] billion; cellular radio business for $[illegible] billion; other businesses worth $[illegible] billion.	[illegible]%
FRED MEYER	$[illegible] million 12/81	$[illegible] million (est.) Retailing operation worth $[illegible] million when taken public in [illegible]; real estate estimated at over $[illegible] million.	[illegible]%
SFN	$[illegible] million [illegible]	$1.[illegible] billion (est.) Assets sold: Scott Foresman for $[illegible] million; South-Western Publishing for $[illegible] million; TV and radio stations for $[illegible] million.	[illegible]%
UNIROYAL	$[illegible] million [illegible]	$1.[illegible] billion (est.) Assets sold: including chemicals business for $[illegible] million; other businesses for $[illegible] million; estimated net worth of the rest of the company is $[illegible] million.	[illegible]%

Since 1981, [illegible] public companies have gone private. Of these, some [illegible] or so have been taken public again or broken up and the assets sold off. The average increase in value for the [illegible] buyouts being bought and being sold again is about [illegible]%. [illegible]

■ DEALS OF THE YEAR • WHY DETROIT'S CARS ARE GETTI

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FORTUNE

SPECIAL REPORT: THE ECONOMY OF THE 1990s

IT'S LESS THAN THREE YEARS AWAY, AND WE'RE ALMOST CERTAIN THAT:

- The U.S. Will Create 13 Million New Jobs
- Labor Shortages Will Be a Big Problem
- Middle Management Will Wither Away
- Manufacturing Will Flourish
- Social Security Will Run a Huge Surplus
- Consumer Electronics Will Be the Hottest Industry
- The World's Financial Markets Will Merge
- The Middle Class Will Prosper

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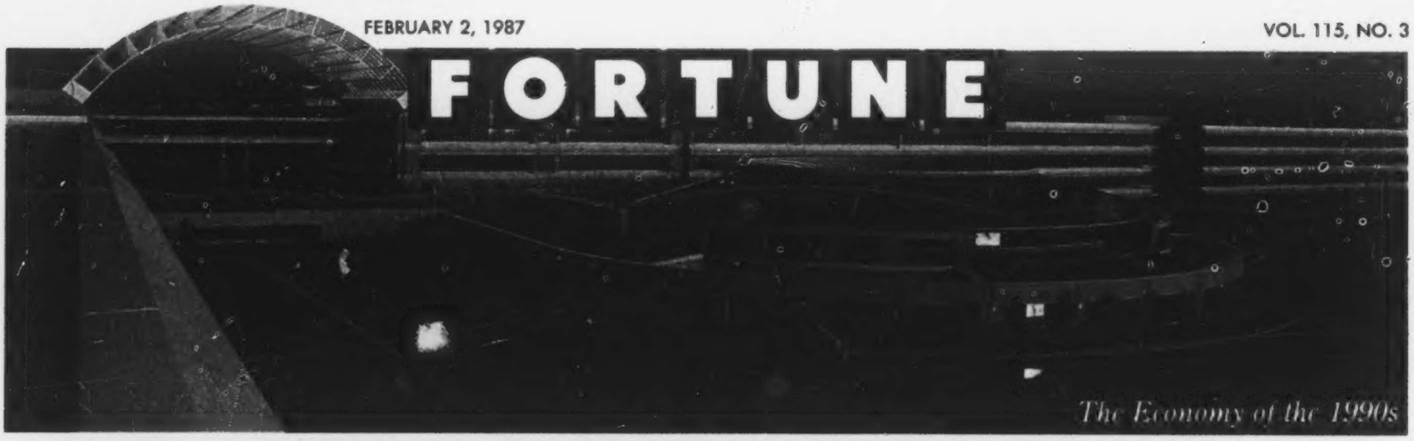

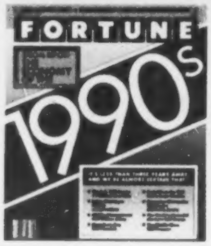

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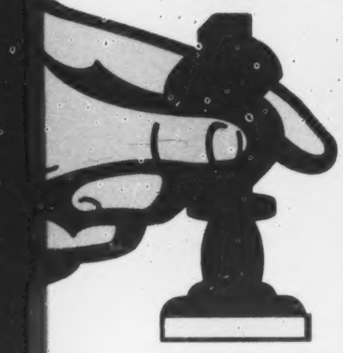


DEALS OF THE YEAR

Undeterred by Wall Street's insider trading scandal, U.S. dealmakers set records in non-oil mergers, leveraged buyouts, and securities offerings in 1986. Tax law changes prompted a year-end spree. The stars: retailers and media companies.

■ *by Daniel P. Wiener*

DUST OFF the record books. FORTUNE's tally of the 50 biggest U.S. deals completed in 1986 includes new highs in virtually every category. Leveraged buyouts reached unprecedented size. Investors bought up two gigantic initial public offerings of common stock as well as several massive junk bond issues linked to mergers and corporate restructurings. Nonetheless, the total value of corporate combinations, securities issues, and buybacks on FORTUNE's list—$92.6 billion—is just under the 1985 total.

As in 1985, media companies were prime takeover targets, while retailers got hotter and hotter. Consolidations soared in the airline industry. The main exceptions were oil companies, which all but sat back after two years of nonstop feasting.

As tax reform took shape, buyers and sellers went looking for matches before year's end. More than a third of the largest deals of 1986 were completed in the year's last three months, a fifth in December alone. For the first time the tally, compiled with the aid of IDD Information Services, excludes the routine but mammoth debt offerings by the Federal National Mortgage Association.

Topping the list was the biggest non-oil amalgamation ever, General Electric's $6.4-billion acquisition of RCA. In snaring the largest U.S. consumer electronics company, GE also picked up NBC, the biggest television network. And while CBS was fending off attackers, the ABC network fell to the lean and hungry managers of Capital Cities Communications for $3.5 billion (deal No. 6).

Three transactions in different industries topped the previous record for a leveraged buyout. The largest was the $6.2-billion privatization of food and consumer product behemoth Beatrice Cos. (No. 2), financed entirely with debt. The deal was originally thought by many on Wall Street to be one of the shakiest ever executed. But Beatrice, confounding the doubters, quickly slashed debt through the sale of operations worth $3.4 billion, including its International Playtex division (tied for No. 25) and soft drink bottling operations (tied for No. 39). Safeway Stores, the largest U.S. supermarket chain, went private in a $4.3-billion deal (No. 4), and savvy managers at Macy's took their mega-retailer private in a $3.6-billion buyout (No. 5).

JUNK BOND OFFERINGS supplied the grease for many of the year's corporate tuneups, and junk bond juggernaut Drexel Burnham Lambert grew mightier than ever. The firm arranged three debt offerings larger than $1 billion, including a record buster for BCI Holdings (No. 14). Even when its facade of invincibility crumbled amid disclosures of insider trading by arbitrager Ivan Boesky, whose ties to Drexel were many, the firm went right on cranking out high-yield bonds, including $1 billion to help finance Safeway's leveraged buyout (tied for No. 39).

With the stock market surging, 1986 was a propitious time for companies to go public. Henley Group's $1.2-billion stock offering (No. 29), the largest U.S. initial public offering ever, barely edged out one by Coca-Cola Enterprises (No. 30). Investors also went hunting for bargains down under, buying $855 million worth of shares in the First Australia Prime Income Fund's first offering (No.47). That shattered a record that had stood since 1983, when Merrill Lynch launched its ill-starred Sci-Tech mutual fund.

Union Carbide was involved in several huge deals. To snuff out GAF's attempted takeover, Carbide spent $3.3 billion buying in 55% of its shares (No. 8) and then sold off its battery division to Ralston Purina (No. 19). In December, Carbide completed the biggest-ever tender offer for debt (No. 11), paying approximately 9% above the market price to retire restrictive junk bonds it had issued only 11 months earlier.

Wall Street dealmakers stuffed their pockets with record advisory fees totaling more than $615 million for the mergers and acquisitions on FORTUNE's list, not counting commissions for arranging the necessary financing. Goldman Sachs was champ for the year, taking in more than $109 million.

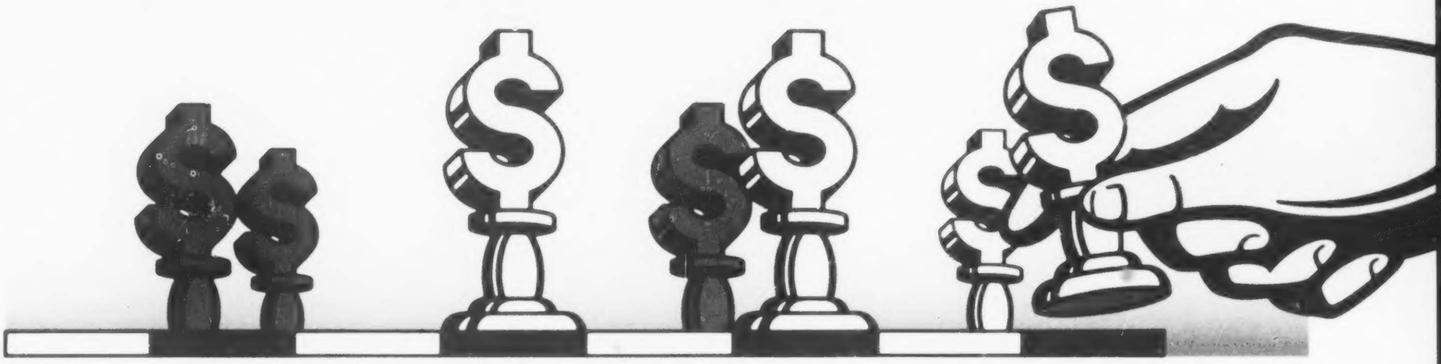
Plenty of big deals are due to close in early 1987. Unilever is readying a friendly $3 billion merger with Chesebrough-Pond's. Despite the Boesky scandal and talk that the government may curb mergers, dealmakers hope to stay busy. "I don't think we've necessarily hit the peak," says George Hornig, a vice president in First Boston's mergers and acquisitions group.

Where will the next big deals be concentrated? Utilities may exercise some muscle. "Utilities without nuclear energy problems are big cash generators and are diversifying into financial services," says Hornig. "Small regional companies are also ripe for consolidation." Retailers will be coveted, and banking combinations should also heat up. With more states allowing mergers between banks in neighboring jurisdictions, the search for partners is accelerating.

REPORTER ASSOCIATES *Katharena Leanne Zanders and David Kirkpatrick*

ILLUSTRATIONS BY JACK TOM

BIGGEST DEALS OF 1986



RANK		VALUE (000) % OF BOOK VALUE	TRANSACTION	FINANCIAL INTERMEDIARIES (Client)	FEE (000)	FEE As % of deal
1	**GENERAL ELECTRIC** (diversified manufacturing) **acquires RCA** (consumer electronics, entertainment)	**$6,406,000** 242%	**Acquisition for cash, completed June 9**	GOLDMAN SACHS (General Electric)	**$15,000**[*]	23%
				LAZARD FRÈRES (RCA)	**$12,000**	19%
2	**BCI HOLDINGS**[1] **acquires BEATRICE COS.** (food, consumer products)	**$6,216,200** 210%	**Leveraged buyout for cash and preferred stock, April 16**	KOHLBERG KRAVIS ROBERTS (BCI Holdings)	**$40,000**	64%
				LAZARD FRÈRES SALOMON BROTHERS (Beatrice)	**$8,000** **$8,000**	13% 13%
3	**BURROUGHS** (computers, electronics) **merges with SPERRY** (computers, electronics) **to form UNISYS**	**$4,753,700**[2] 144%	**Purchase of 51% of Sperry common stock through cash tender offer, followed by purchase of remaining shares for cash and preferred stock, September 16**	LAZARD FRÈRES JAMES D. WOLFENSOHN (Burroughs)	**$7,500** **$5,000**	16% 11%
				FIRST BOSTON (Sperry)	**$8,750**	18%
4	**SAFEWAY STORES HOLDINGS**[1] **acquires SAFEWAY STORES** (supermarkets)	**$4,284,311** 254%	**Leveraged buyout for cash, debentures, and common stock warrants, November 24**	KOHLBERG KRAVIS ROBERTS MORGAN STANLEY (Safeway Holdings)	**$45,000** **$10,000**	1.05% .23%
				KOHLBERG KRAVIS ROBERTS MERRILL LYNCH CAPITAL MARKETS (Safeway)	**$15,000** **$11,000**	.35% .26%
5	**MACY MERGER**[3] **acquires R.H. MACY** (department stores)	**$3,564,992** 246%	**Leveraged buyout for cash, July 15**	GOLDMAN SACHS (Macy Merger)	**$30,250**	85%
				JAMES D. WOLFENSOHN (R. H. Macy)	**$5,500**	15%
6	**CAPITAL CITIES COMMUNICATIONS acquires ABC** (broadcasting)	**$3,509,000** 239%	**Acquisition for cash, June 6**	FIRST BOSTON (ABC)	**$7,500**	21%
7	**CAMPEAU** (real estate developer) **acquires ALLIED STORES**	**$3,505,716** 266%	**Acquisition for cash, December 31**	FIRST BOSTON (Campeau)	**$7,000**	20%
				GOLDMAN SACHS (Allied Stores)	**$12,000**	34%
8	**UNION CARBIDE** (chemicals) **repurchases 55% of its common stock**	**$3,332,853** 141%	**Tender offer to exchange cash, notes, and debentures for 38.8 million shares, to fend off hostile takeover bid by GAF, January 15**	MORGAN STANLEY	**$35,000**	1.05%
9	**CLEVELAND ELECTRIC** (public utility) **merges with TOLEDO EDISON** (public utility) **to form CENTERIOR ENERGY**	**$3,140,493**[4] 232%	**Merger through exchange of common stock, April 29**	MORGAN STANLEY (Cleveland Electric)	**$3,794**	.12%
				MERRILL LYNCH CAPITAL MARKETS (Toledo Edison)	**$2,625**	.08%

Mergers and acquisitions

Securities offerings and buybacks

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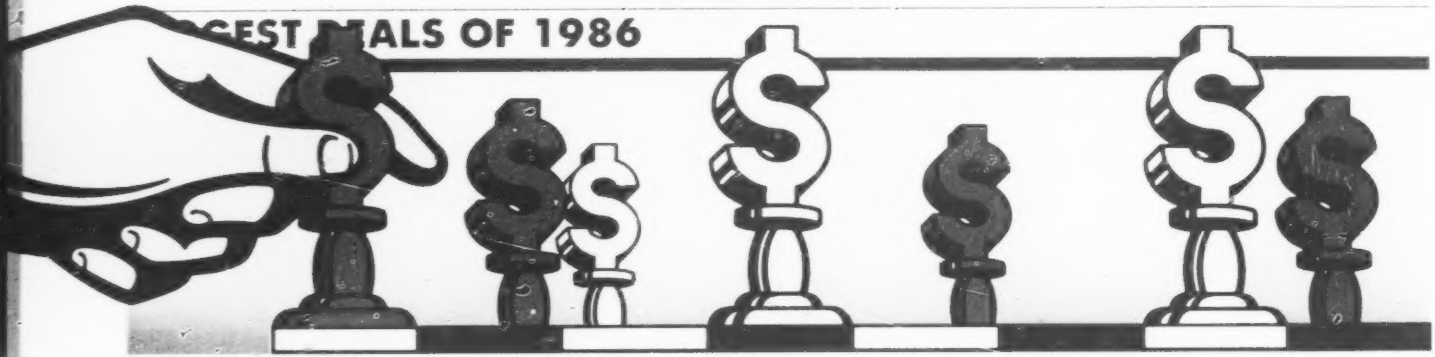
[*] FORTUNE estimate.
[1] Group led by Kohlberg Kravis Roberts.
[2] Valued as if Burroughs were the buyer.
[3] Group led by management.
[4] Valued as if Cleveland Electric were the buyer.

GEST ALS OF 1986



RANK	VALUE (000) % OF BOOK VALUE	TRANSACTION	FINANCIAL INTERMEDIARIES (Client)	FEE (000)	FEE As % of deal
10 **USX** (steel, oil and gas) **acquires TEXAS OIL & GAS**	**$2,996,646** 168%	**Acquisition for common stock, February 11**	GOLDMAN SACHS (USX)	**$7,000**	.23%
			FIRST BOSTON (Texas Oil & Gas)	**$10,000**	.33%
11 **UNION CARBIDE** (chemicals) **repurchases debt issued to finance stock buyback**[5]	**$2,736,000**	**Cash tender offer for 13¼% notes due 1993, 14¼% notes due 1996, and 15% debentures due 2006 to reduce interest costs and eliminate financial restrictions, December 5**	FIRST BOSTON	**$1,725**	.06%
12 **OCCIDENTAL PETROLEUM acquires MIDCON** (gas pipelines)	**$2,576,188** 228%	**Purchase of 53% of MidCon common stock through cash tender offer, followed by exchange of Occidental shares for remaining stock, April 1**	FIRST BOSTON (Occidental)	**$7,000**	.27%
			MERRILL LYNCH CAPITAL MARKETS (MidCon)	**$9,500**	.37%
13 **MAY DEPARTMENT STORES acquires ASSOCIATED DRY GOODS** (department stores)	**$2,380,082** 231%	**Acquisition for common stock, October 6**	MORGAN STANLEY (May)	**$6,875**	.29%
			GOLDMAN SACHS SHEARSON LEHMAN BROTHERS (Associated)	**$6,750** **$6,750**	.28% .28%
14 **BCI HOLDINGS**[6] **sells bonds**	**$1,750,000**	**Offering of $800 million of 12½% debentures due 1998 and $950 million of 12¾% debentures due 2001, to help finance BCI's acquisition of Beatrice Cos.,**[7] **April 10**	DREXEL BURNHAM LAMBERT	**$62,188**	3.55%
15 **Consortium of communications companies**[8] **acquires GROUP W CABLE from WESTINGHOUSE ELECTRIC**	**$1,730,000** N.A.	**Acquisition for cash, June 19**	FIRST BOSTON SHEARSON LEHMAN BROTHERS (Westinghouse)	**$4,875** **$4,875**	.28% .28%
16 **AANCOR HOLDINGS**[9] **acquires NATIONAL GYPSUM** (building materials)	**$1,569,997** 250%	**Leveraged buyout for cash and debentures, April 29**	GOLDMAN SACHS SALOMON BROTHERS DILLON READ (Aancor Holdings)	**$10,000** **$1,250** **$1,250**	.64% .08% .08%
17 **OCCIDENTAL PETROLEUM sells notes**	**$1,487,853**	**Offering of $594 million of 10% notes due 1991, $298 million of 10½% notes due 1993, and $596 million of 10⅞% notes due 1996 to finance MidCon acquisition,**[10] **March 21**	DREXEL BURNHAM LAMBERT* DONALDSON LUFKIN & JENRETTE KIDDER PEABODY SHEARSON LEHMAN BROTHERS DEAN WITTER REYNOLDS	**$23,250**	1.56%
18 **FOX TELEVISION STATIONS**[11] **acquires six television stations from METROMEDIA BROADCASTING**	**$1,472,000** N.A.	**Acquisition for cash and preferred stock, March 6**	DREXEL BURNHAM LAMBERT ALLEN & CO. (Fox)	**$22,500** **$11,500**	1.53% .78%
			DREXEL BURNHAM LAMBERT (Metromedia)	**$33,150**	2.26%
19 **RALSTON PURINA** (animal feeds) **acquires battery products division from UNION CARBIDE** (chemicals)	**$1,415,000** 204%	**Acquisition for cash, June 30**	MORGAN STANLEY (Union Carbide)	**$4,900**	.35%

Mergers and acquisitions

Securities offerings and buybacks

N.A. Not available.

*Lead manager.

[5] See deal No. 8.

[6] Group led by Kohlberg Kravis Roberts.

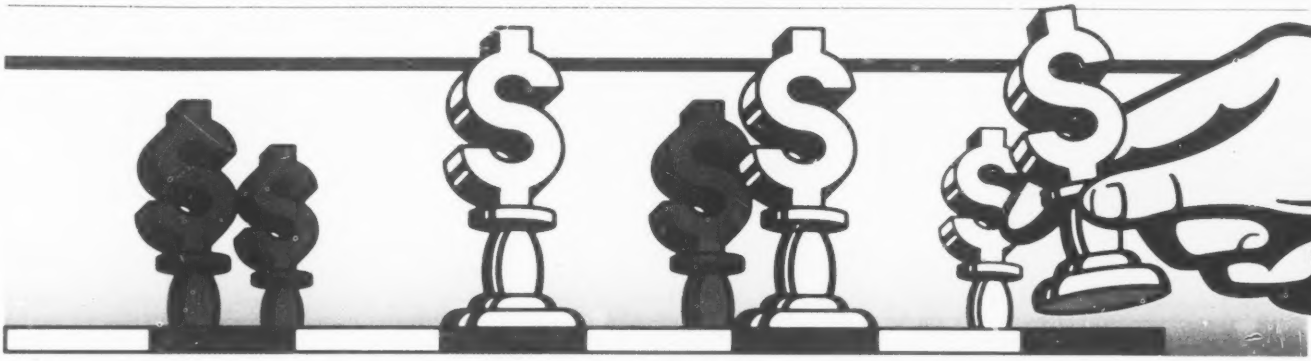
[7] See deal No. 2.

[8] American Television & Communications, Telecommunications Inc., Comcast, Daniels & Associates, and Century Communications.

[9] Private investors and National Gypsum managers.

[10] See deal No. 12.

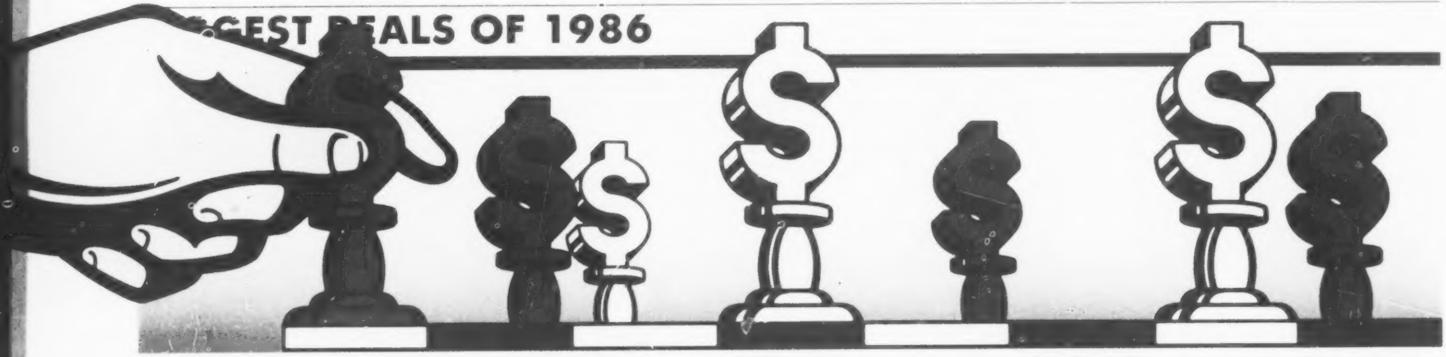
[11] Jointly controlled by the News Corp. Ltd. and Rupert Murdoch.



RANK		VALUE (000) % OF BOOK VALUE	TRANSACTION	FINANCIAL INTERMEDIARIES (Client)	FEE (000)	FEE As % of deal
20	**ANAC HOLDING**[12] **acquires D.S. REVCO** (drugstores)	**$1,370,904** 355%	**Leveraged buyout for cash, December 29**	SALOMON BROTHERS GOLENBERG (Anac Holding)	**$6,000** **$6,000**	.44% .44%
				GOLDMAN SACHS (Revco)	**$4,000**	.29%
21	**WICKES COS.** (diversified retailer) **sells bonds**	**$1,356,374**	**Offering of 11⅞% debentures due 2001 to finance future acquisitions, June 5**	DREXEL BURNHAM LAMBERT	**$41,400**	3.05%
22	**RELIANCE ACQUISITION**[13] **acquires RELIANCE ELECTRIC** (motors) **from EXXON**	**$1,350,000** N.A.	**Leveraged buyout for cash, December 30**	CITICORP CAPITAL INVESTORS PRUDENTIAL-BACHE SECURITIES (Reliance Acquisition)	**N.A.** **N.A.**	— —
23	**ICH CORP.** (insurance) **acquires insurance businesses from TENNECO**	**$1,344,000** N.A.	**Acquisition for cash, December 31**	KIDDER PEABODY STEPHENS (ICH)	**$13,000**[E] **$3,000**[E]	.97% .22%
				MORGAN STANLEY (Tenneco)	**$4,900**[E]	.36%
24	**TURNER BROADCASTING SYSTEM acquires MGM/UA ENTERTAINMENT** (movie production)	**$1,329,475** 563%	**Acquisition for cash and preferred stock, March 25**	DREXEL BURNHAM LAMBERT (Turner)	**$11,700**	.88%
				BEAR STEARNS DREXEL BURNHAM LAMBERT (MGM/UA)	**$10,000** **$7,500**	.75% .56%
25	**PLAYTEX HOLDINGS**[14] **acquires INTERNATIONAL PLAYTEX from BCI HOLDINGS**[15]	**$1,250,000** N.A.	**Leveraged buyout of former Beatrice Cos. division for cash and preferred stock, December 12**	DREXEL BURNHAM LAMBERT (Playtex Holdings)	**N.A.**	—
				GOLDMAN SACHS (BCI Holdings)	**N.A.**	—
25	**CIE. GÉNÉRALE D'ELECTRICITÉ and others**[16] **acquire telecommunications businesses from ITT**	**$1,250,000** N.A.	**Acquisition for cash, December 30**	MORGAN STANLEY (CGE)	**$4,700**[E]	.38%
				LAZARD FRÈRES GOLDMAN SACHS (ITT)	**N.A.** **N.A.**	— —
27	**UNION PACIFIC** (railroad, natural resources) **acquires OVERNITE TRANSPORTATION** (trucking)	**$1,210,293** 502%	**Cash tender offer, October 20**	DILLON READ (Union Pacific)	**$5,120**	.42%
				MORGAN STANLEY (Overnite)	**$4,560**	.38%
28	**COCA-COLA acquires bottling companies and certain other assets of JTL CORP.**[17]	**$1,200,000** N.A.	**Acquisition for cash, September 29**	FIRST BOSTON (Coca-Cola)	**N.A.**	—
				GOLDMAN SACHS (JTL)	**N.A.**	—
29	**HENLEY GROUP**[18] **sells common stock**	**$1,190,000**	**Initial public offering of 56 million shares, May 20**	LAZARD FRÈRES* FIRST BOSTON MERRILL LYNCH CAPITAL MARKETS	**$56,000**	4.71%
30	**COCA-COLA ENTERPRISES** (group of bottling companies)[19] **sells common stock**	**$1,178,100**	**Initial public offering of 71.4 million shares, November 21**	ALLEN & CO.* FIRST BOSTON SALOMON BROTHERS SHEARSON LEHMAN BROTHERS	**$59,262**	5.03%

[E] FORTUNE estimate.
N.A. Not available.
*Lead manager.
[12] Group of private investors and Revco managers.
[13] Group led by Reliance managers and including Citicorp Capital Investors and Prudential-Bache Securities.
[14] Group of private investors and managers.
[15] Group led by Kohlberg Kravis Roberts. In a related deal BCI acquired a 20% interest in International Playtex.
[16] Joint venture in which Cie. Générale D'Electricité holds 55.6%, ITT holds 37%, Société Générale de Belgique holds 5.7%, and Crédit Lyonnais holds 1.7%.
[17] Privately owned bottling company.
[18] Company composed of 35 businesses spun off by Allied-Signal.
[19] Coca-Cola holds 49% interest.

GEST DEALS OF 1986



RANK		VALUE (000) % OF BOOK VALUE	TRANSACTION	FINANCIAL INTERMEDIARIES (Client)	FEE (000)	FEE As % of deal
31	**LOCKHEED** (aircraft) **acquires SANDERS ASSOCIATES** (defense electronics)	**$1,162,659** 327%	**Cash tender offer, July 30**	FIRST BOSTON (Lockheed)	**$4,000**	34%
				KIDDER PEABODY (Sanders)	**$500**	04%
32	**ECKERD HOLDINGS**[20] **acquires JACK ECKERD** (drugstores)	**$1,156,320** 216%	**Leveraged buyout for cash and debentures, April 30**	MERRILL LYNCH CAPITAL MARKETS GOLDMAN SACHS (Fees shared by parties in deal)	**$14,500** **$4,075**	1.25% 35%
33	**FRUEHAUF HOLDINGS**[21] **acquires FRUEHAUF** (truck trailers)	**$1,127,835** 155%	**Leveraged buyout for cash and common stock, December 23**	MERRILL LYNCH CAPITAL MARKETS KIDDER PEABODY SALOMON BROTHERS (Fruehauf Holdings)	**$21,695** **$5,651** **$1,250**	1.92% 50% 11%
34	**WICKES COS.** (diversified retailer) **acquires COLLINS & AIKMAN** (textiles)	**$1,116,945** 317%	**Cash tender offer, December 9**	DREXEL BURNHAM LAMBERT (Wickes)	**$6,250**	56%
				GOLDMAN SACHS (Collins)	**$5,800**	52%
35	**INTERNATIONAL PAPER acquires HAMMERMILL PAPER**	**$1,084,915** 193%	**Cash tender offer, November 10**	LAZARD FRÈRES (International Paper)	**$4,000**	37%
				MORGAN STANLEY FIRST BOSTON (Hammermill)	**$4,600** **$3,840**	42% 35%
36	**WELLS FARGO** (bank holding company) **acquires CROCKER NATIONAL BANK from MIDLAND BANK**	**$1,072,000** 91%	**Acquisition for cash, May 30**	MORGAN STANLEY (Wells Fargo)	**$4,000**°	.37%
				GOLDMAN SACHS (Midland)	**N.A.**	—
37	**L'AIR LIQUIDE** (industrial gases) **acquires BIG THREE INDUSTRIES** (industrial gases)	**$1,043,863** 210%	**Cash tender offer, October 20**	LAZARD FRERES (L'Air Liquide)	**$5,219**	50%
				SALOMON BROTHERS (Big Three)	**$1,000**	10%
38	**HONEYWELL** (computers, aerospace) **acquires SPERRY AEROSPACE** (avionics, electronics) **from UNISYS** (computers)	**$1,025,000** N.A.	**Acquisition for cash, December 30**	DILLON READ (Honeywell)	**N.A.**	—
				SHEARSON LEHMAN BROTHERS (Unisys)	**N.A.**	—
39	**COCA-COLA acquires bottling companies from BCI HOLDINGS**[22]	**$1,000,000** N.A.	**Acquisition of former Beatrice Cos. operations for cash, September 23**	NONE		
39	**SAFEWAY STORES HOLDINGS**[22] **sells notes and debentures**	**$1,000,000**	**Offering of $750 million of 11¾% notes due 1996 and $250 million of 12% debentures due 1998 to finance the acquisition of Safeway Stores, November 18**[23]	DREXEL BURNHAM LAMBERT	**$40,000**	4.00%
41	**OCCIDENTAL PETROLEUM sells bonds**	**$989,950**	**Offering of 11¾% debentures due 2011 to finance MidCon acquisition, March 21**[24]	DREXEL BURNHAM LAMBERT* FIRST BOSTON SALOMON BROTHERS	**$18,750**	1.89%

Mergers and acquisitions

Securities offerings and buybacks

°FORTUNE estimate.
N.A. Not available.
*Lead manager.

[20] Group led by Merrill Lynch and managers.
[21] Group led by Merrill Lynch.
[22] Group led by Kohlberg Kravis Roberts.
[23] See deal No. 4.
[24] See deal No. 12.

BIGGEST DEALS OF 1986

RANK		VALUE (000) % OF BOOK VALUE	TRANSACTION	FINANCIAL INTERMEDIARIES (Client)	FEE (000)	FEE As % of deal
42	**TEXTRON** (multi-industry) **acquires EX-CELL-O** (machine tools)	**$953,250**	**Cash tender offer, September 16**	BEAR STEARNS (Textron)	**$4,500**	.47%
		188%		GOLDMAN SACHS (Ex-Cell-O)	**$4,100**	.43%
43	**HANSON TRUST** (multi-industry) **acquires SCM** (typewriters, food processing)	**$926,000**	**Acquisition for cash, March 31**[25]	ROTHSCHILD INC. (Hanson)	**$5,500**	.59%
		139%		GOLDMAN SACHS (SCM)	**$7,500**	.81%
44	**COASTAL** (oil and gas) **sells notes and bonds**	**$900,000**	**Offering of $500 million of 11¼% notes due 1996 and $400 million of 11¾% debentures due 2006 to refinance debt, June 30**	DREXEL BURNHAM LAMBERT	**$23,000**	2.56%
44	**DELTA AIR LINES acquires WESTERN AIR LINES**	**$900,000**	**Acquisition for cash and common stock, December 18**	GOLDMAN SACHS (Delta)	**$2,750**	.31%
		1,753%		DILLON READ (Western)	**$4,050**	.45%
46	**NWA** (airlines) **acquires REPUBLIC AIRLINES**	**$884,000**	**Acquisition for cash, August 12**	FIRST BOSTON (NWA)	**$1,750**	.20%
		251%		DREXEL BURNHAM LAMBERT (Republic)	**$1,375**	.16%
47	**FIRST AUSTRALIA PRIME INCOME FUND**[26] **sells common stock**	**$855,000**	**Initial public offering of 85.5 million shares, April 17**	PRUDENTIAL-BACHE SECURITIES* BEAR STEARNS NIKKO SECURITIES	**$57,713**	6.75%
48	**PEPSICO** (soft drinks, snack foods) **acquires KENTUCKY FRIED CHICKEN** (fast food) **from RJR NABISCO** (cigarettes, food processing)	**$840,000** N.A.	**Acquisition for cash, October 1**	DILLON READ (RJR Nabisco)	**N.A.**	–
49	**SCHERING-PLOUGH** (drugs) **acquires KEY PHARMACEUTICALS**	**$836,518**	**Acquisition for cash, June 26**	MERRILL LYNCH CAPITAL MARKETS (Schering-Plough)	**$2,400**	.29%
		1,378%		MORGAN STANLEY (Key)	**$3,700**	.44%
50	**MAXXAM GROUP** (real estate) **acquires PACIFIC LUMBER**	**$832,607**	**Purchase of 64.7% through cash tender offer, followed by acquisition of remaining shares for cash, February 26**	DREXEL BURNHAM LAMBERT (Maxxam)	**$4,300**	.52%
		522%		SALOMON BROTHERS (Pacific Lumber)	**$4,414**	.53%

N.A. Not available.
*Lead manager.

[25] Hanson previously owned 32%.
[26] Closed-end investment company.

EXPLANATORY NOTES

Deals eligible for the list include:

1. U.S. public offerings of securities (except short-term securities) by domestic and foreign corporations issued under a single prospectus or offering circular.
2. Cash tender offers by domestic corporations or by foreign corporations tendering in the U.S., including those of companies buying in their own securities.
3. Mergers or acquisitions in which the buyer or seller is a U.S. company or part of one. To be eligible, offerings must be effective in 1986 and tender offers must have expired during the year. Mergers and acquisitions are eligible if legally closed during the year or, when not legally closed, if the prospective buyer has paid a portion of the purchase price in cash during the year.

The list excludes short-term financings, government securities, routine debt offerings by financial companies, repackagings of mortgage and other debt, and financings other than public offerings—such as bank borrowings and private placements.

VALUE OF DEAL

Debt assumed in an acquisition is not included in the price. Amounts for cash offerings are the total amounts raised; for tenders the total amount paid. All securities issued in acquisitions or mergers are valued at the market price on the date of closing. When two companies merge through an exchange of stock to form a new company, the company whose stockholders received the larger share of the new company is treated as the buyer, and only those shares issued to stockholders of the smaller company are valued.

PERCENT OF BOOK VALUE

Book value calculations indicate the price paid (or amount of equity capital raised) per share as a percentage of the shareholders' equity per share of the acquired company or issuer at the end of the last quarter preceding the transaction.

TRANSACTION

Dates under this heading are effective dates for offerings, expiration dates for tenders, and closing dates for acquisitions and mergers.

FINANCIAL INTERMEDIARIES

For underwritten public offerings, the co-managers are listed and the lead manager is indicated by an asterisk. In the case of acquisitions and mergers, the intermediaries are typically investment banking firms that assisted in the transaction.

FEE

The figures represent the amounts charged by the financial intermediaries assisting in the deals. In underwritings, part of the fee is paid to other members of the underwriting syndicate or to dealers other than the co-managers. In mergers and acquisitions, fees paid for financing services are excluded, when possible.

THE BEST AND WORST

The blue chips of the Dow Jones industrials set a sizzling pace last year, but some small companies were the biggest winners. If Wall Street strategists are right, over-the-counter stocks could kick up a lot more dust in 1987.

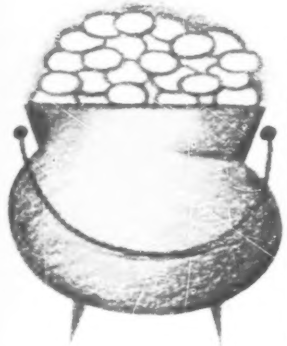
■ *by Joshua Mendes*

THESE are dizzying times for investors, with the stock market's thundering advance in the opening days of the new year following close on 1986's record-breaking climb. Last year, as FORTUNE's lists of the best- and worst-performing stocks show, the rewards were handsomest for investors with a taste for fast-rising little companies.

This list is different from other such January exercises. The rankings, which bring together stocks traded on the New York Stock Exchange, the American Stock Exchange, and the over-the-counter market, are based on total return—price appreciation plus reinvested dividends. Interactive Data, a database subsidiary of Chase Manhattan Corp., compiled the lists, which exclude American depositary receipts of foreign companies, partnership units, and stocks that began the year selling for less than $5.

If market indicators were the sole guide to investing, the best plays would have been among the 30 big-name companies that make up the Dow Jones industrial average, which broke the 2000 barrier in early January. The Dow, paced by such hot performers as Merck and Owens-Illinois, was up 22.58% for the year, not counting dividends, and Standard & Poor's 500-stock index rose 14.62%. That dwarfed the 7.36% rise in the Nasdaq composite index of 4,500 over-the-counter stocks. Yet most of the top performers in FORTUNE's ranking were over-the-counter standouts.

The gold medal winner in 1986 was Viratek, a small pharmaceutical company in Costa Mesa, California, that may have found a treatment for AIDS. One dollar invested in the stock last January 1 was worth nearly $6 at the year's end. Viratek is expected to apply to the Food and Drug Administra-



NEW YORK STOCK EXCHANGE

AMERICAN STOCK EXCHANGE

OVER THE COUNTER

THE 100 BEST STOCKS

		STOCK PRICE 12/31		DIVIDENDS PER SHARE	TOTAL RETURN TO INVESTORS
		1985	1986		
1	**Viratek** (Costa Mesa, Calif.)	$10.625	$63.00	$0.00	493%
2	**Chambers Development** (Pittsburgh)	$10.50	$16.875	$10.44*	221%
3	**Control Resource Industries** (Michigan City, Ind.)	$6.125	$18.75	$0.00	206%
4	**Crown Crafts** (Calhoun, Ga.)	$8.25	$24.00	$0.00	191%
5	**Jefferson Smurfit** (Alton, Ill.)	$13.625	$38.50	$0.50	188%
6	**COMB** (Minneapolis)	$7.812	$22.25	$0.00	185%
7	**North American Holding** (Hartford)	$5.125	$7.25	$6.38*	183%
8	**Envirodyne** (Chicago)	$8.125	$22.125	$0.00	172%
9	**Old National Bancorp** (Spokane)	$15.568	$42.00	$0.20	171%
10	**Woodstream** (Lititz, Pa.)	$9.00	$23.875	$0.40	171%
11	**Seagate Technology** (Scotts Valley, Calif.)	$7.25	$19.125	$0.00	164%
12	**Olson Industries** (Sherman Oaks, Calif.)	$11.75	$29.50	$0.00	151%
13	**Reebok International** (Avon, Mass.)	$9.333	$23.375	$0.00	150%
14	**Hovnanian Enterprises** (Red Bank, N.J.)	$7.444	$18.50	$0.00	149%
15	**Owens-Corning Fiberglas** (Toledo)	$37.50	$13.75	$69.60*	148%
16	**First Capital Holdings** (Las Vegas)	$6.00	$14.875	$0.00	148%
17	**Nord Resources** (Dayton)	$8.583	$21.25	$0.00	148%
18	**Circuit City Stores** (Richmond)	$12.437	$30.625	$0.06	147%
19	**Genentech** (South San Francisco)	$34.875	$85.00	$0.00	144%
20	**Ashton-Tate** (Culver City, Calif.)	$18.375	$44.50	$0.00	142%
21	**Cherokee Group** (North Hollywood, Calif.)	$9.50	$23.00	$0.00	142%
22	**Maxtor** (San Jose, Calif.)	$7.187	$17.375	$0.00	142%
23	**HAL** (Honolulu)	$9.00	$21.75	$0.00	142%
24	**Convenient Food Mart** (Rosemont, Ill.)	$5.818	$14.00	$0.00	141%
25	**SPI Pharmaceuticals** (Covina, Calif.)	$11.75	$28.00	$0.06	139%

*Includes extraordinary onetime payout of cash, stock, or debt securities.

STOCKS OF 1986

tion this winter for approval of ribavirin, a drug that combats viruses, for use against AIDS. A green light, analysts say, could translate into annual sales of $1 billion or more. "Viratek has been one of the favorite small-investor stocks of the year," says Steven Kaye, portfolio manager of Fidelity Group's Select Biotechnology Fund. He gives Viratek a fifty-fifty chance of receiving approval by midyear.

Most of 1986's top performers are far from the world of high technology. The No. 2 stock, and best performer on the American exchange, was Chambers Development, a Pittsburgh garbage collection company. Coming in third was another over-the-counter company, Control Resource Industries of Michigan City, Indiana, which is cleaning up by removing asbestos from buildings. Top performer of the Big Board stocks—and 13th overall—was Reebok International, a New England–based maker of trendy athletic footwear. Reebok's estimated sales and earnings sprinted ahead by nearly 200% in 1986.

MANY OF 1986's 50 worst-performing stocks suffer from a common malady: the oil slump. Over one-fourth of these companies, including five banks, are based in the petroleum states of Texas, Oklahoma, and Alaska. But Bioassay Systems, which was tied for booby prize, had other problems. Sales of its diagnostic kits, which test for viruses, have gone nowhere. Advanced Tobacco Products, sharing the worst-performer title, bet heavily on a smoke-free cigarette named Favor. But so far, at least, smokers prefer smoke.

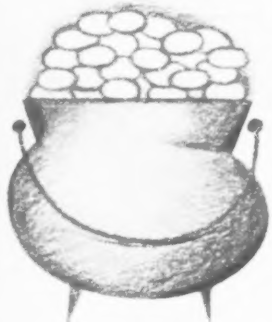
As for 1987, a growing number of investment strategists think the stock market rally will broaden and that the smart money will go into small growth stocks or mutual funds specializing in them. This group has never underperformed the market longer than four years, according to Dennis Sherva, director of research at Morgan Stanley. But it has lagged since 1983, and Sherva points to the group's extremely reasonable valuation, as reflected in the T. Rowe Price New Horizons Fund, a mutual fund that invests in such companies. The average price-earnings multiple of stocks in the fund is the same as the market's, but was more than twice as high in mid-1983, when high-tech fever drove many small growth stocks to levels never regained. Sherva thinks small stocks are due for a surge this year.

THE 100 BEST STOCKS

		STOCK PRICE 12/31		DIVIDENDS PER SHARE	TOTAL RETURN TO INVESTORS
		1985	1986		
26	**First Federal Bank FSB** (Nashua, N.H.)	$17.75	$41.50	$0.40	137%
27	**Roper** (Kankakee, Ill.)	$7.937	$18.375	$0.36	137%
28	**DST Systems** (Kansas City, Mo.)	$11.25	$26.00	$0.20	133%
29	**Gap** (San Bruno, Calif.)	$15.687	$35.75	$0.31	130%
30	**Westamerica Bancorp** (San Rafael, Calif.)	$22.00	$49.00	$0.70	128%
31	**Bayly** (Denver)	$6.00	$13.50	$0.12	127%
32	**Intermet** (Atlanta)	$5.416	$12.125	$0.16	127%
33	**American Barrick Resources** (Toronto)	$6.687	$15.125	$0.00	126%
34	**Ponderosa** (Dayton)	$13.00	$28.75	$0.40	126%
35	**Texas Air** (Houston)	$15.00	$33.75	$0.00	125%
36	**Presidential Life** (Nyack, N.Y.)	$12.50	$28.00	$0.06	125%
37	**Countrywide Credit** (Pasadena, Calif.)	$5.637	$12.375	$0.25	124%
38	**American Israeli Paper Mills** (Hadera, Israel)	$7.875	$17.125	$0.30	123%
39	**Riverside Group** (Jacksonville, Fla.)	$5.00	$11.125	$0.00	123%
40	**Duquesne Systems** (Pittsburgh)	$14.375	$31.75	$0.00	121%
41	**Ryan's Family Steak Houses** (Greenville, S.C.)	$9.722	$21.375	$0.00	120%
42	**Computer Factory** (New York City)	$7.968	$17.50	$0.00	120%
43	**For Better Living** (San Juan Capistrano, Calif.)	$5.125	$11.00	$0.10	118%
44	**Rollins Environmental Services** (Wilmington, Del.)	$11.916	$25.875	$0.06	118%
45	**View-Master Ideal Group** (Beaverton, Ore.)	$8.333	$18.00	$0.00	116%
46	**Puerto Rican Cement** (San Juan)	$8.125	$17.375	$0.10	115%
47	**Eastern Bancorp** (Burlington, Vt.)	$11.00	$23.50	$0.10	115%
48	**Micropolis** (Chatsworth, Calif.)	$8.75	$18.75	$0.00	114%
49	**Ero Industries** (Chicago)	$6.833	$14.625	$0.00	114%
50	**Laidlaw Industries** (Hinsdale, Ill.)	$7.75	$16.375	$0.12	114%

The big payoff *last year went to investors who had their money in hot little companies that predominate among the stock market's winners. High on the list are mundane outfits that collect garbage and make bedcovers.*

THE 100 BEST STOCKS



THE REST OF THE 100 BEST

NEW YORK STOCK EXCHANGE
AMERICAN STOCK EXCHANGE
OVER THE COUNTER

		STOCK PRICE 12/31		DIVIDENDS PER SHARE	TOTAL RETURN TO INVESTORS
		1985	1986		
51	**Masco Industries** (Taylor, Mich.)	$10.75	$22.75	$0.00	112%
52	**Re Capital** (Weehawken, N.J.)	$6.666	$14.00	$0.07	111%
53	**Americus Trust for Exxon** (New York City)	$7.00	$14.75	$0.00	111%
54	**Zondervan** (Grand Rapids, Mich.)	$13.125	$27.625	$0.00	110%
55	**Bush Industries** (Little Valley, N.Y.)	$8.125	$17.00	$0.00	109%
56	**Blockbuster Entertainment** (Dallas)	$5.625	$11.75	$0.00	109%
57	**Computrac** (Richardson, Tex.)	$7.25	$15.125	$0.00	109%
58	**Consumers Power** (Jackson, Mich.)	$7.50	$15.625	$0.00	108%
59	**Lotus Development** (Cambridge, Mass.)	$25.00	$51.75	$0.00	107%
60	**K-V Pharmaceutical** (St. Louis)	$5.833	$12.00	$0.00	106%
61	**Owens-Illinois** (Toledo)	$26.375	$53.00	$0.94	106%
62	**Capitol Transamerica** (Madison, Wis.)	$5.062	$10.125	$0.26	105%
63	**Washington Mutual Savings** (Seattle)	$11.416	$23.00	$0.33	105%
64	**Wayne-Gossard** (Chattanooga, Tenn.)	$11.875	$24.00	$0.20	104%
65	**Champion Products** (Rochester, N.Y.)	$19.25	$38.625	$0.54	104%
66	**FMC** (Chicago)	$65.50	$25.75	$80.55*	104%
67	**Public Service Co. of Indiana** (Plainfield)	$7.25	$14.75	$0.00	103%
68	**Q-Med** (Clark, N.J.)	$8.75	$17.75	$0.00	103%
69	**Home Owners Federal S&L** (Boston)	$10.444	$21.00	$0.00	101%
70	**Buckeye Financial** (Columbus, Ohio)	$6.714	$13.50	$0.00	101%
71	**Catalyst Energy Development** (New York City)	$12.125	$24.375	$0.00	101%
72	**Agency-Rent-A-Car** (Solon, Ohio)	$11.428	$22.75	$0.00	99%
73	**Tyson Foods** (Springdale, Ark.)	$13.75	$27.25	$0.04	98%
74	**innovative Software** (Overland Park, Kan.)	$7.00	$13.875	$0.00	98%
75	**American Fructose** — Class B (Stamford, Conn.)	$6.375	$12.625	$0.00	98%
76	**Affiliated Publications** (Boston)	$35.833	$70.125	$0.44	97%
77	**American Fructose** — Class A (Stamford, Conn.)	$6.50	$12.75	$0.00	96%
78	**Korea Fund** (New York City)	$17.625	$34.00	$0.44	95%
79	**Fieldcrest Cannon** (Eden, N.C.)	$17.437	$33.50	$0.57	95%
80	**Alo-Scherer Healthcare** (Fort Lauderdale, Fla.)	$10.25	$20.00	$0.00	95%
81	**Lear Siegler** (Santa Monica, Calif.)	$48.50	$91.125	$2.00	94%
82	**Tultex** (Martinsville, Va.)	$9.50	$18.125	$0.28	94%
83	**ACI Holdings** (Newport Beach, Calif.)	$7.50	$14.50	$0.00	93%
84	**CVB Financial** (Chino, Calif.)	$10.399	$20.00	$0.00	92%
85	**Standard Products** (Cleveland)	$19.666	$37.00	$0.62	92%
86	**Bankeast** (Manchester, N.H.)	$9.375	$17.625	$0.30	92%
87	**Countrywide Mortgage Investments** (Pasadena, Calif.)	$10.375	$18.00	$1.65	92%
88	**Ranco** (Dublin, Ohio)	$21.00	$38.75	$0.84	91%
89	**Viatech** (Syosset, N.Y.)	$5.625	$10.75	$0.00	91%
90	**Midway Airlines** (Chicago)	$6.875	$13.125	$0.00	91%
91	**Society for Savings** (Hartford)	$11.988	$22.75	$0.00	90%
92	**Puritan-Bennett** (Overland Park, Kan.)	$15.687	$29.50	$0.20	90%
93	**Banker's Note** (Smyrna, Ga.)	$5.666	$10.75	$0.00	90%
94	**Dynascan** (Chicago)	$7.00	$13.25	$0.00	89%
95	**Dual-Lite** (Newtown, Conn.)	$7.125	$13.375	$0.08	89%
96	**Davis Water & Waste Industries** (Thomasville, Ga.)	$8.166	$15.25	$0.16	89%
97	**Heico** (Mendota, Ill.)	$15.875	$29.875	$0.05	88%
98	**J.B. Hunt Transportation Services** (Lowell, Ark.)	$13.75	$25.75	$0.12	88%
99	**Fedders USA** (Peapack, N.J.)	$5.125	$9.50	$0.13	88%
100	**Accuray** (Columbus, Ohio)	$24.50	$45.50	$0.28	88%

*Includes extraordinary onetime payout of cash, stock, or debt securities.

AND THE 50 WORST

THE 50 WORST STOCKS

	THE 50 WORST STOCKS	STOCK PRICE 12/31		DIVIDENDS PER SHARE	TOTAL RETURN TO INVESTORS
		1985	1986		
1	**Bioassay Systems** (Woburn, Mass.)	$6.375	$.125	$00.00	−98%
2	**Advanced Tobacco Products** (San Antonio)	$12.125	$.25	$00.00	−98%
3	**Wedtech** (Bronx, N.Y.)	$11.00	$.406	$00.00	−96%
4	**Integrity Financial Group** (Paramus, N.J.)	$5.375	$.25	$00.00	−95%
5	**Chargit** (New York City)	$8.00	$.406	$00.00	−95%
6	**Citisource** (New York City)	$6.875	$.50	$00.00	−93%
7	**Westworld Community Healthcare** (Lake Forest, Calif.)	$11.875	$.875	$00.40	−93%
8	**Savers Inc.** (Little Rock, Ark.)	$11.75	$.875	$00.00	−92%
9	**Spectran** (Sturbridge, Mass.)	$21.50	$2.125	$00.00	−90%
10	**Machine Vision International** (Ann Arbor, Mich.)	$5.00	$.50	$00.00	−90%
11	**Stereo Village** (Decatur, Ga.)	$8.875	$1.062	$00.00	−88%
12	**Birdfinder** (Sarasota, Fla.)	$5.00	$.625	$00.00	−88%
13	**McLean Industries** (New York City)	$9.625	$1.375	$00.00	−86%
14	**Alaska Mutual Bancorp** (Anchorage)	$14.875	$2.375	$00.00	−84%
15	**BancOklahoma** (Tulsa)	$17.00	$2.75	$00.10	−84%
16	**Pattern Processing** (Minneapolis)	$6.125	$1.125	$00.00	−82%
17	**Alaska National Bank of the North** (Fairbanks)	$13.50	$2.50	$00.00	−81%
18	**Haber** (Towaco, N.J.)	$16.75	$3.375	$00.00	−80%
19	**Telco Systems** (Menlo Park, Calif.)	$14.25	$3.00	$00.00	−79%
20	**Financial Security S&L** (Delray Beach, Calif.)	$5.875	$1.25	$00.00	−79%
21	**United Bancorp Alaska** (Anchorage)	$8.181	$1.75	$00.00	−79%
22	**Reid-Ashman** (Santa Clara, Calif.)	$5.25	$1.125	$00.00	−79%
23	**Tylan** (Carson, Calif.)	$11.25	$2.437	$00.00	−78%
24	**Texas International** (Oklahoma City)	$5.75	$1.25	$00.00	−78%
25	**Telecrafter** (Lakewood, Colo.)	$12.625	$2.75	$00.00	−78%
26	**Bolt Technology** (Norwalk, Conn.)	$5.625	$1.25	$00.00	−78%
27	**McFaddin Ventures** (Houston)	$6.75	$1.50	$00.00	−78%
28	**Brock Hotel** (Irving, Tex.)	$37.50	$8.375	$00.00	−78%
29	**ALC Communications** (Birmingham, Mich.)	$10.00	$2.375	$00.00	−76%
30	**LTV** (Dallas)	$6.75	$1.625	$00.00	−76%
31	**Gearhart Industries** (Fort Worth)	$7.625	$1.875	$00.00	−75%
32	**Electro-Catheter** (Rahway, N.J.)	$18.125	$4.50	$00.00	−75%
33	**Admac** (Kent, Wash.)	$11.50	$2.875	$00.00	−75%
34	**Radiation Technology** (Rockaway, N.J.)	$11.00	$2.75	$00.00	−75%
35	**Thermal Profiles** (Commack, N.Y.)	$6.375	$1.625	$00.00	−75%
36	**Sandy** (Troy, Mich.)	$14.625	$3.75	$00.00	−74%
37	**Cucos** (Metairie, La.)	$9.00	$2.312	$00.00	−74%
38	**Overland Express** (Indianapolis)	$10.625	$2.75	$00.00	−74%
39	**Trio-Tech International** (Burbank, Calif.)	$9.00	$2.375	$00.00	−74%
40	**Ross Stores** (Newark, Calif.)	$18.00	$4.75	$00.00	−74%
41	**First City Bancorp of Texas** (Houston)	$12.875	$3.375	$00.00	−74%
42	**ECI Telecom** (Tel Aviv)	$8.50	$2.25	$00.00	−74%
43	**GCA** (Bedford, Mass.)	$7.50	$2.00	$00.00	−73%
44	**United Financial Group** (Houston)	$6.50	$1.75	$00.00	−73%
45	**Air Midwest** (Wichita, Kan.)	$10.125	$2.75	$00.00	−73%
46	**Fuddruckers** (San Antonio)	$5.875	$1.625	$00.00	−72%
47	**Engineered Systems & Development** (San Jose, Calif.)	$14.25	$4.00	$00.00	−72%
48	**Daisy Systems** (Mountain View, Calif.)	$29.50	$8.375	$00.00	−72%
49	**Rada Electronic Ind.** (Herzliya-Pituach, Israel)	$8.75	$2.50	$00.00	−71%
50	**Techdyne** (Hialeah, Fla.)	$5.25	$1.50	$00.00	−71%

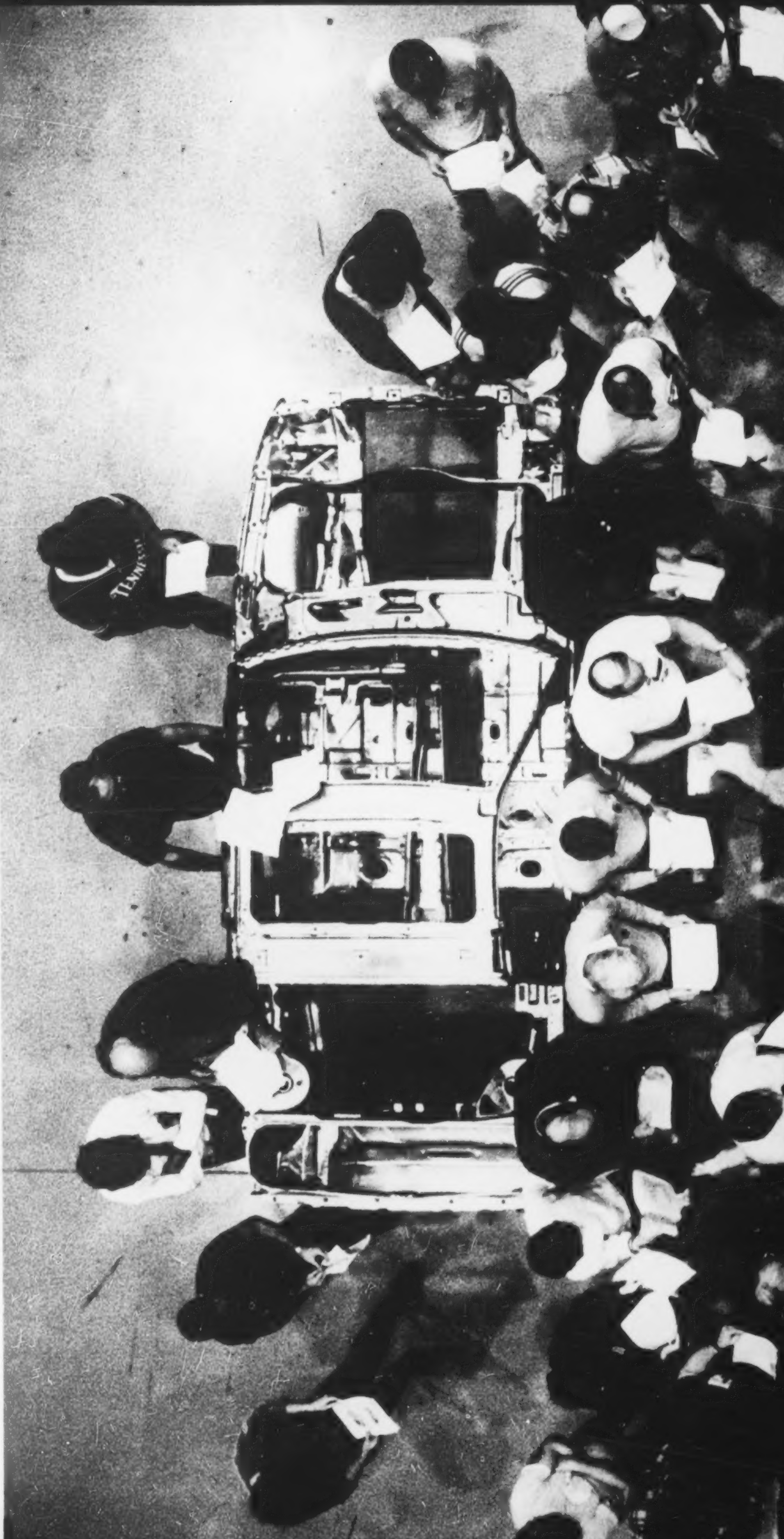
COMPETITION

DETROIT'S CARS REALLY ARE GETTING BETTER

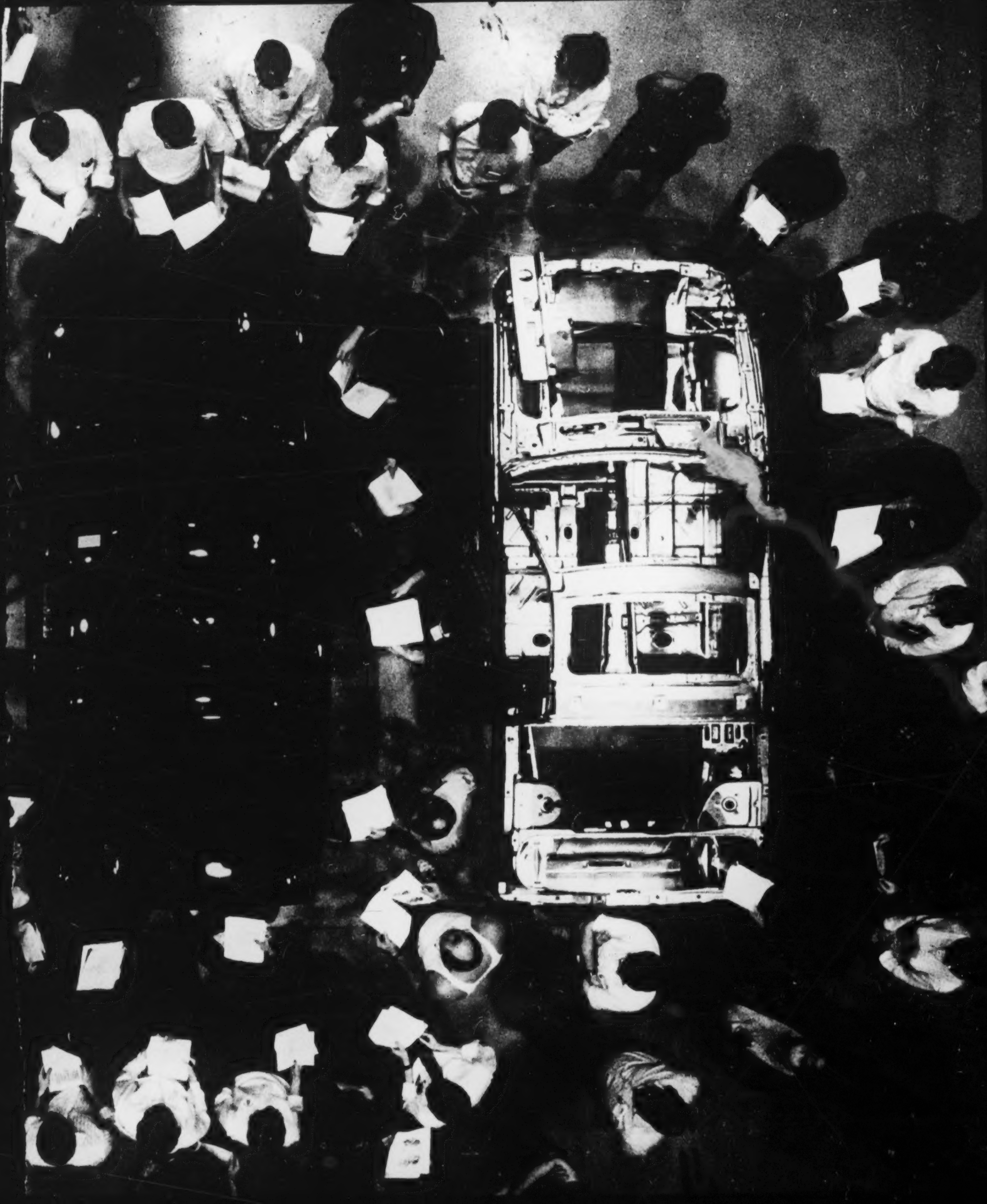
by Jeremy Main

WITH A LITTLE LUCK, you can buy a Ford today that has absolutely nothing wrong with it when you drive out of the dealer's lot. With a bit more luck, you can get a General Motors or Chrysler car that doesn't need anything fixed. Detroit still makes some lemons, and anyone who has bought one lately might be a tad skeptical about the news that U.S. automakers are getting quality under control. But the objective evidence gleaned from surveys of owners, records of problems reported, and internal audits—mostly proprietary information circulated only within the auto industry—shows much improvement. The Big Three are making better cars than they did in 1980. The surveys may differ in detail, but they see the same big picture: Ford leading a strong and general advance.

The tumultuous, expensive revolution in technology, management, labor relations, and corporate culture forced on Detroit by



A quality conference *is held daily as managers, supervisors, and hourly workers in Pontiac, Michigan, gather around the Pontiac Fiero car and chassis they make to see how they can improve them.*



Taking apart the competition *to see how others do it is one way of learning how to improve. Engineers at General Motors' Technical Center in Detroit*

PHOTOGRAPHS BY GERD LUDWIG–VISUM

dismantle a Honda Acura Legend, a new Japanese entry in the luxury field, down to the last screw.

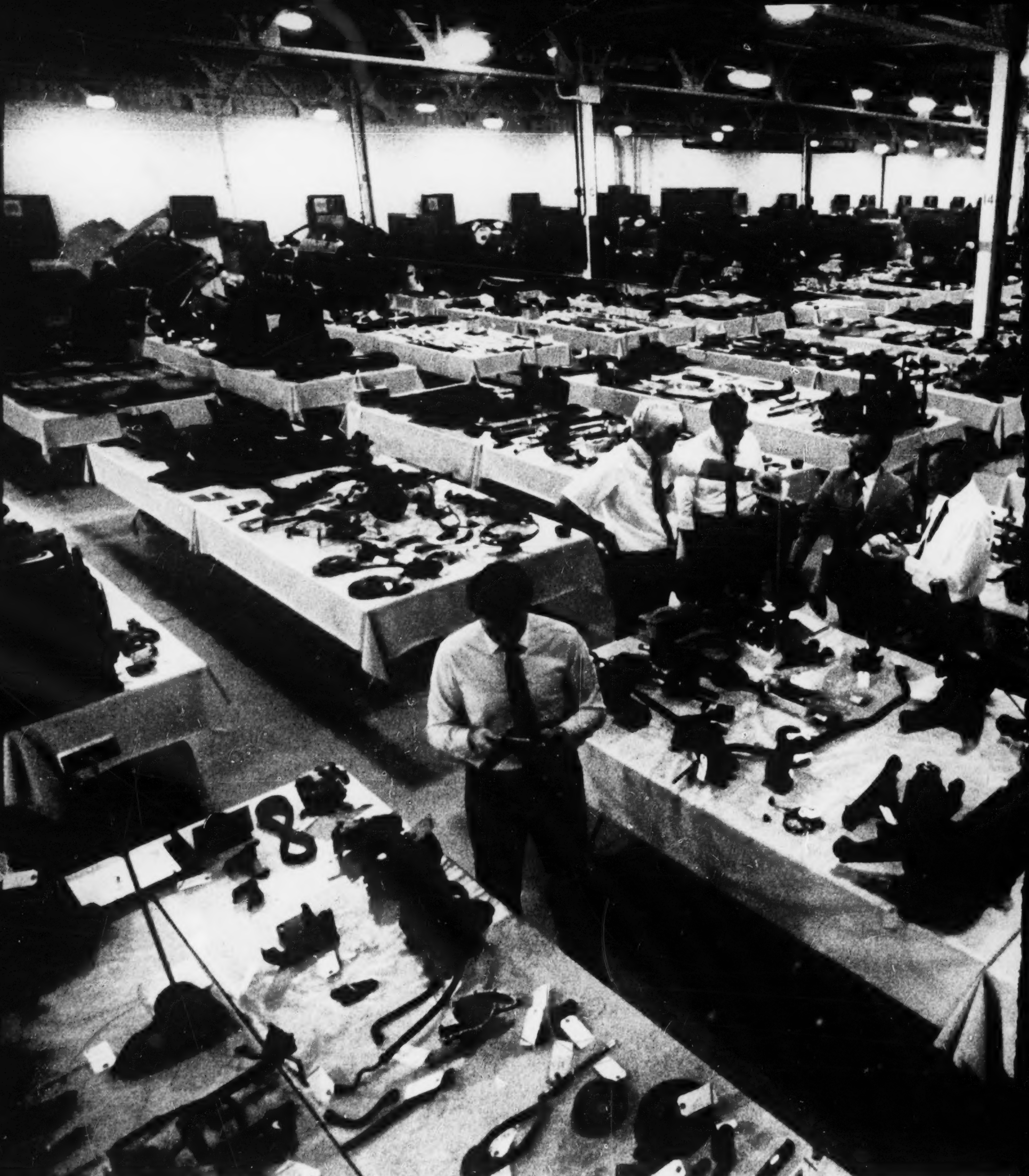
the success of Japan is beginning to pay off. Some of the best-built American cars, such as the big Lincoln Town Car and the Mercury Grand Marquis, are within reach of world-class quality, as defined by Honda, Mercedes, and Toyota.

The first table on page 96 shows the progress of the Big Three, based on data developed by the Toledo office of Maritz Marketing Research Inc. Maritz recently took over the syndicated Rogers Survey, which produced a massive annual "blue book," the industry standard for rating and comparing the performance of the automakers. (FORTUNE obtained the data in Detroit; Maritz does not publish the results, prohibits clients from doing so, and would not confirm the accuracy of the data.) Like other surveys, Maritz measures the number of "things gone wrong" per 100 cars. The thing can be whatever causes a new owner to go back to complain to the dealer, whether it is a blemish in the paint or a thrown rod.

The Maritz survey of owners who had operated their 1985 cars for eight months shows that Ford was the best U.S. automaker in 1985, with 214 things gone wrong per 100 cars. In 1980 Ford was the worst after eight months, with an average of 392 problems per 100 cars. Ford's achievement is striking, especially since it pulled ahead of GM (256 things gone wrong) and Chrysler (285) while they too were improving. Japanese manufacturers averaged 132. What these figures mean, essentially, is that the owner of a 1985 Japanese car, on average, found 1.3 flaws in his car, the owner of a Ford two, the GM customer 2.5, and the buyer of a Chrysler nearly three.

OTHER OBJECTIVE ratings come up with similar results. Product & Consumer Evaluation Inc. of Farmington Hills, Michigan, which conducts the PACE survey (also syndicated confidentially to the automakers), found that Japan produced the best 1986 models, led by Toyota. Next were the European makers, topped by Mercedes. Ford, GM, and Chrysler followed. The *Power Report*, published annually by J.D. Power & Associates of Westlake Village, California, also found Ford the best of the American '86s in its latest report (issued in August), which rated foreign cars by companies and domestic cars by nameplates. Power's broad "consumer satisfaction index" gauges owner opinions of dealer service as well as the quality of the cars themselves. Honda, Mer-

REPORTER ASSOCIATE *Ann Goodman*



Disassembled cars *produced by other manufacturers fill a giant "tear down" room at the GM Tech Center. Each row of tables, from left to right, holds the*

parts of one car for the engineers' inspection, beginning with the chassis against the left wall.

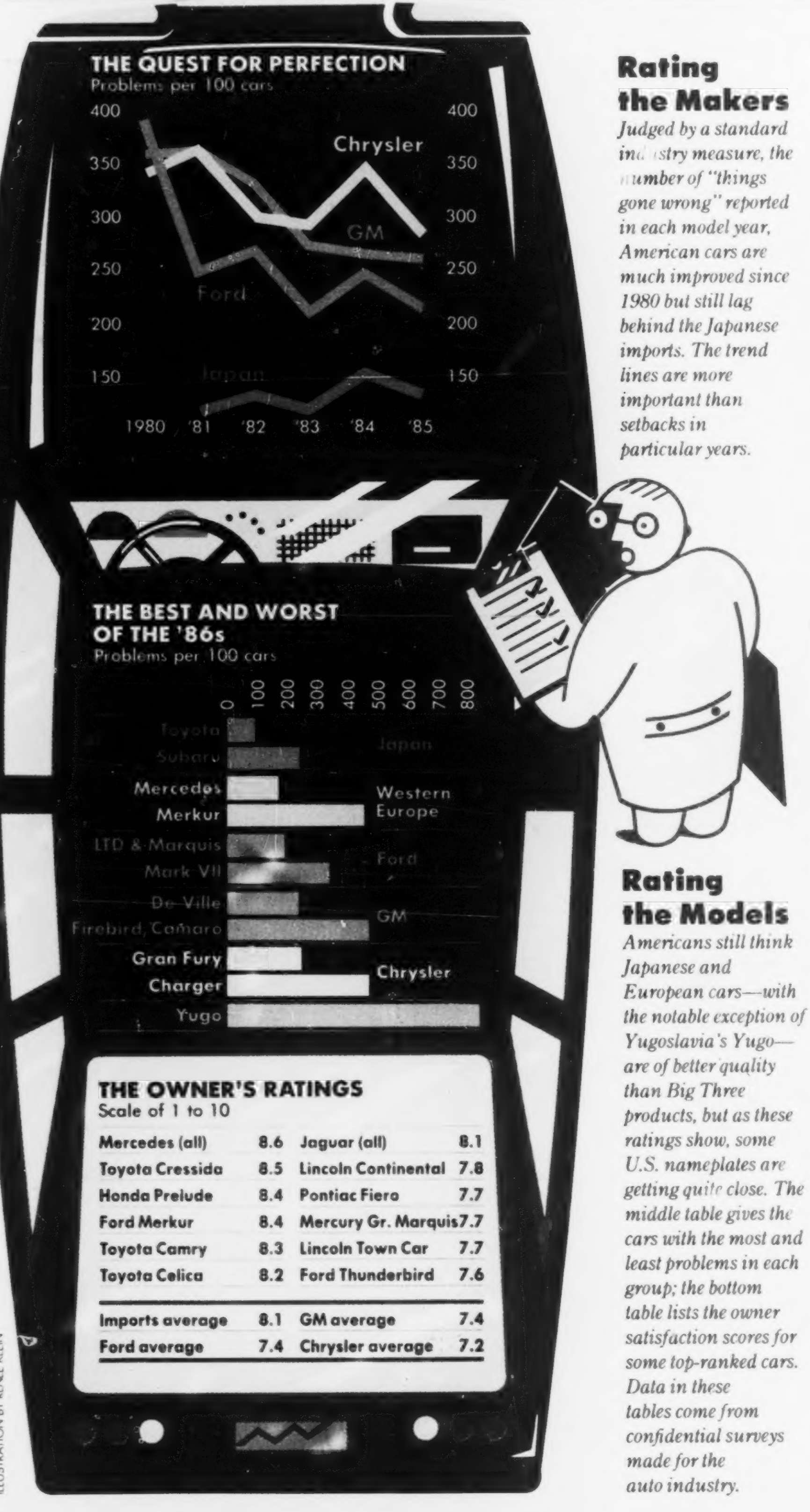
cedes, Toyota, and Mazda won the top four spots in this Power ranking. Lincoln came in fifth, Mercury 12th, and Cadillac 14th in a field of 30.

Expert opinion backs the survey results. Says Robert E. Cole, a professor at the University of Michigan business school and an expert on automaking in Japan and the U.S.: "The best of ours are about as good as the worst of theirs, and that is a tremendous achievement. But there is still a significant gap." Keith E. Crain, publisher and editorial director of *Automotive News*, one of the major trade publications, believes, "There's no doubt that the American auto industry has dramatically improved quality." James E. Harbour, an auto industry consultant who has helped manufacturers with quality and productivity problems, even suggests that "quality may be becoming a nonissue."

TO SOME DEGREE quality is found in the eyes of the beholder. A middle-aged banker might want the durability of a Volvo, a young computer hotshot the sporty good looks of Pontiac's Fiero. The styling of Ford's bulbous Taurus may appeal to one driver, the engineering of a Mercedes to another. Some cars wear a halo, while others are garbed in sackcloth. The Mercedes owner whose car goes on the blink is likely to fly into a fury with his mechanic or dealer, or his wife's driving—anything but the revered car. On the other hand, no one expects perfection of a Yugo.

Still, every car has to meet certain basic requirements. The first is appearance. In the 1960s Germany alerted American consumers to the notion that flawless assembly was a truer form of beauty than slabs of carelessly applied chrome. The Japanese astutely adopted that philosophy in the 1970s, when the Big Three were turning out cars with molding that wobbled along the body and hunks of glue slopped in with the paint. The Japanese first established their reputation for quality with perfectly aligned molding, precise spaces around the doors, panels that lined up, bodies that didn't rattle—what automakers call good fits and finishes. Jim Harbour thinks that Detroit's fits and finishes are becoming competitive with those of the best imports. The research data seem to bear him out. An investigation for Ford by yet another survey outfit, Research Data Analysis of Bloomfield Hills, Michigan, shows that complaints about Ford's body work, while still the major source of trouble, dropped from 167 per 100 cars in 1982 to 111 in 1986.

continued



THE QUEST FOR PERFECTION

THE BEST AND WORST OF THE '86s

THE OWNER'S RATINGS
Scale of 1 to 10

Mercedes (all)	8.6	Jaguar (all)	8.1
Toyota Cressida	8.5	Lincoln Continental	7.8
Honda Prelude	8.4	Pontiac Fiero	7.7
Ford Merkur	8.4	Mercury Gr. Marquis	7.7
Toyota Camry	8.3	Lincoln Town Car	7.7
Toyota Celica	8.2	Ford Thunderbird	7.6
Imports average	8.1	GM average	7.4
Ford average	7.4	Chrysler average	7.2

ILLUSTRATION BY RENEE KLEIN

Rating the Makers

Judged by a standard industry measure, the number of "things gone wrong" reported in each model year, American cars are much improved since 1980 but still lag behind the Japanese imports. The trend lines are more important than setbacks in particular years.

Rating the Models

Americans still think Japanese and European cars—with the notable exception of Yugoslavia's Yugo—are of better quality than Big Three products, but as these ratings show, some U.S. nameplates are getting quite close. The middle table gives the cars with the most and least problems in each group; the bottom table lists the owner satisfaction scores for some top-ranked cars. Data in these tables come from confidential surveys made for the auto industry.

After fits and finishes, the owner cares most about "driveability," a term that describes how reliably and smoothly a car runs. An engine that balks on cold mornings or a congenital staller will send a driver right into the arms of Nippon. Here again the improvement seems clear. For example, complaints about Ford's engines dropped from 60 per 100 cars in 1982 to 24 in 1986.

CONSUMERS UNION, a nonprofit organization that rates products, treats reliability as the prime ingredient of auto quality. Its massive survey of subscribers focuses on frequency of repairs and is revealed in exhaustive detail in the annual auto issue of *Consumer Reports*. Last year, as in 1980, Japanese and some European cars were consistently better than average, while American cars were still mostly average or below. But Robert D. Knoll, head of Consumers Union's auto test division, says the average itself has moved up.

Warranty costs are among the best indicators of quality—but they are the hardest to dig out precisely because auto companies regard them as so revealing. Japanese cars cost their makers an average of $55 in warranty costs in the first year of operation, says one well-placed source in Detroit. First-year warranty costs for American cars run from about $100 to $400.

Manufacturers have two ways to achieve high quality. The old-fashioned way, which once made Cadillac a car of world repute and still produces finely crafted Mercedes, Jaguars, and Rolls-Royces, requires a lot of careful inspection, rework, and fiddling. It makes for very expensive cars. Jaguar produces two cars a year per employee, Mercedes six, according to Harbour.

The Japanese approach could not be more different. Learned from American prophets of quality who were long ignored in their own land, the method creates a production system so carefully honed that it produces very few mistakes and therefore requires few inspectors and little rework. It throws in the side benefit of being cost effective because not much has to be inspected, rejected, or fixed. The Japanese formula, as related in many a best-seller, requires an approach in some ways alien to Detroit—an openness toward workers, cooperation between design engineers and manufacturing engineers, the use of management tools such as just-in-time inventories, and constant attention to details.

One detail tells the story of quality improvement at Ford's Essex engine plant in

Windsor, Ontario, which produces the 3.8-liter V-6 engines used in the Cougar and Thunderbird. Supposedly identical parts used to vary so much that pistons, for example, had to be chosen individually to fit each engine block. When Essex opened in 1981, Ford made so many different-size pistons for a single type of engine that it had to classify them into 13 sizes, each separated by ten microns (one-thousandth of a millimeter). By 1986 Essex had reduced the classes of pistons to three by cutting the variances with improved casting and machining. This year Essex plans to make only one size piston; any piston will fit any engine block, as in Japan.

The Big Three have all embraced the Japanese approach and adopted the goal, unthinkable in Detroit a decade ago, of "zero defects." This upheaval has been painful, nowhere more so than at General Motors.

Being the biggest and richest of the Big Three, GM tried to meet the Japanese challenge by doing too much. GM spent $53 billion to upgrade its plants and build new ones. At the same time, it tried to remake the corporation's culture and structure, introduce fleets of entirely new models, equip its cars with elaborate electronic doodads, and meet emission and fuel consumption rules. "We had an unbelievable amount of stuff on our plate, and we thought we could handle it, but we ran into problems," says Carlisle R. Davis, director of quality for the Chevrolet-Pontiac-Canada Group.

THE ONCE REGAL Cadillac is a victim of GM's attempts to do everything at the same time. Remember the 8-6-4 engine introduced in 1980? The idea was to turn GM's big eight-cylinder engine into a fuel sipper. Depending on power requirements, a computer would tell the engine whether it needed to fire four, six, or eight cylinders. It didn't work, and vanished in 1984—but not before thousands of owners learned to hate it for its mechanical and electronic failures. GM's attempt to make a diesel engine out of a beefed-up gas engine did not work either. Owners were lucky if they got 30,000 miles out of it. More recently the 440-T4 transmissions installed in '84 and '85 Fleetwoods and De Villes and other GM cars have frequently needed repair or replacement.

GM's sporty little Fiero illustrates why Detroit can stumble even when it makes its best efforts to catch up. Conceived before the quality philosophy caught hold, the Fiero was originally designed as a cheap commuter car. The project was killed and revived twice before it came to life as a jazzy, midengine two-seater. Along the way it acquired the Chevette's leaden steering system, which had no power boost in the Fiero because of the great distance between the engine and the front wheels. The car's ridiculous 10.3-gallon gas tank, designed with frugal commuting in mind, was the smallest made in the U.S. When the four-cylinder engine proved too unexciting for a sports car, Pontiac added a six-cylinder engine, but the engine fits so tightly that it takes a skilled mechanic to change the spark plugs. Worst of all, in the early models coolant from the radiator up front got so chilled by the time it reached the hot engine farther back that cracks developed in the engine block. Pontiac tried to assuage its customers by replacing engines free long after warranties had expired. For the most part these design errors have been or are being corrected, so that Fiero is now, in Harbour's view, "a class vehicle."

At GM, "we had an unbelievable amount of stuff on our plate, and we thought we could handle it, but we ran into problems."

At the Pontiac, Michigan, plant where the car is assembled, managers, supervisors, and some line workers attend daily quality briefings that attest to Pontiac's desire to produce a fine car. A giant bulletin board on the plant floor keeps track of Fiero's quality. When it was first produced in 1984, Fiero scored 74 out of a possible 100, based on owner satisfaction surveys in GM's CAMIP (Continuous Automotive Marketing Information Process), conducted by Research Data Analysis. The bulletin board's most recent quarterly data show Fiero scoring 91, vs. 99 for Toyota's MR2, 97 for Mazda's RX7, and 89 for Nissan's Pulsar NX. Inside GM, Fiero looks good, since the company average CAMIP score is 85.

GM has overcome many of the problems with Fiero and Cadillac, but the mistakes hurt, and have doubtless contributed to the company's loss of market share in recent years. Fiero sales slipped 21% from 1985 to 1986, according to sales figures compiled by *Automotive News*, and the plant dropped its second shift after shutting down production for two weeks at New Year's. Cadillac sales dropped 3.5% from 1985 to 1986. Replacing bad engines in Cadillacs and some other models has cost GM an estimated $90 million. To help the division become a leader again, GM has just reorganized the Buick-Olds-Cadillac group, giving Cadillac its own engineering, design, and manufacturing capacities.

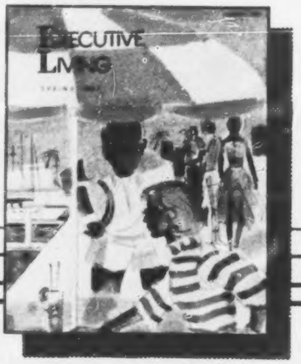
HOW MUCH has GM learned? Chevrolet's snappy 1987 four-door Corsicas and two-door Berettas, conceived in the age of quality, will tell a lot. All the major groups involved in the two cars, from toolmaking to marketing, have worked together since the beginning three years ago to solve quality problems as they surfaced. A rattle in the dashboard, for instance, was recently discovered, traced to its source—too much slack cable—and eliminated on the production line within two weeks. In the old days GM would not even have heard of the problem for months and might not have corrected it until the next model run.

Being the worst of the three in 1980 in quality, Ford had an easier time improving—at least at first. Equally important, Ford has the advantage of being a highly centralized company; once top management decided to pursue quality, it pushed through new practices, such as setting tougher standards for suppliers, rapidly and unequivocally. At decentralized GM, the divisions tended to go off every which way, and directives from the top still get lost in the bureaucracy. Ford cars are not flawless, of course. *Consumer Reports* recently complained that the reliability of the Tempo and Topaz are "much worse than average." But the introduction of the Taurus and Sable at the end of 1985 (delayed to allow for some fixes) was a lot less troubled than the introduction of the Escort and Lynx in 1980. Still, the new models suffered recalls; for example, the sulfurous smell of rotten eggs in some of the first cars had to be eliminated by a new catalytic converter.

Adversity also favored Chrysler. Since it was fighting for its life in 1980, the company had to simplify and concentrate on producing its K-body cars (the Dodge Aries and Plymouth Reliant), which is not a bad recipe for improving quality. A 50,000-mile, five-year warranty added a powerful reason for promoting the virtue. George F. Butts, vice president of quality and productivity at Chrysler, says claims have turned out to be less than half what the company expected under the generous warranty plan. This year Chrysler will further simplify its work by farming out production of its big V-8 en-

Fashions come and go. But style goes on and on.

FORTUNE announces EXECUTIVE LIVING



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gine cars—the Fifth Avenue, the Gran Fury, and the Diplomat—to American Motors; Mitsubishi already builds the subcompact Plymouth Colt. With the first of the popular minivans, Chrysler scored its biggest success of the 1980s, and even competitors admit that the two entries, the Dodge Caravan and the Plymouth Voyager, are among the best-built vehicles in the U.S.

Up to this year, Chrysler's improvements had not saved it from placing third among the Big Three in the research of major independent organizations, so Chrysler commissioned its own survey last March from Creative Information Services of Rochester, Michigan. Miraculous to behold, Creative Information discovered that Chrysler was the best of the Big Three in "cars and trucks combined." Neither Chrysler nor the survey firm will disclose any details of the survey, except to say that it used the usual "things gone wrong" basis. But now Chrysler is getting some help from the preliminary Maritz study of 1986 models (the full 1986 blue book isn't out yet). It shows that the carmaker's quality took a big jump from 1985 to 1986, squeaking past GM but still substantially behind Ford. Since the 1986 Power survey also puts Chrysler ahead of GM, Chrysler seems to be climbing out of the cellar.

FOREIGN CARS haven't been immune to the quality problems the Big Three are struggling to solve. Indeed, the new Yugo, a Fiat resurrected by a Yugoslav automaker, had the distinction of being outstandingly the worst car in the PACE survey, with a score of 838 things gone wrong per 100 cars—worse than Detroit even at its nadir. Yugo claims to have corrected many of the problems.

A mysterious malady called "sudden acceleration" has afflicted both U.S. and foreign cars. Cars with automatic transmissions suddenly take off for no apparent reason. The Big Three, American Motors, Nissan, Toyota, and even Audi and Mercedes have been scarred by sudden acceleration. Last August the National Highway Traffic Safety Administration dropped an investigation into sudden acceleration that covered 60 million GM cars made between 1973 and 1986. The agency said it could not order a recall because it could not cite a specific defect that needed correcting. However, the agency has since reopened its investigation of the 1982 to 1985 J cars, such as the Chevrolet Cavalier and Buick Skylark, because of new complaints. The Audi 5000, an otherwise excellent $20,000-and-up vehicle, has been especially hurt by the syndrome. Recently NHTSA asked the company to voluntarily recall more than 230,000 of the cars. The cause could be, as Audi has suggested, that drivers are mashing down on the accelerator when they think they are hitting the brake, or it could be a mechanical problem or a series of them. No one has yet offered a definitive answer.

It may well be, as Harbour and others assert, that Detroit's efforts have eliminated quality as a reason for choosing a foreign car over an American car. Ray Windecker, a longtime market analyst who works for Ford, argues his research shows that "new Japanese cars average just under two negative comments each and Ford cars just under three, and many of those are about irritants, not mechanical failure. If a buyer elects to pay several hundred dollars more for a Japanese car in the belief that he is getting a truly better car, he is kidding himself." But even if the difference is that small, it will take a long time for the reputation of American cars to catch up with their performance.

And Harbour sees a new danger for Detroit. While the U.S. automakers are catching up, the Japanese, having decided to go for the upper end of the market, are reaching for new levels of quality with advanced technology. Most Japanese cars sold in the U.S. are, or soon will be, equipped with highly sophisticated engines that produce better performance and mileage. Many, for example, now boast four valves per cylinder instead of the usual two, a costly refinement that yields more efficient combustion. The Japanese are also leading in the development of silky-smooth electronic transmissions and in speed-sensitive power steering, which gives the driver more feel of the road at higher speeds. Mercedes's widely advertised drive to pamper its owners with solicitous road service takes quality improvement in yet another direction.

U.S. automakers are also advancing technologically. Today's engines are packed with devices unimagined a few years ago. Electronic engine controls, for example, can diagnose problems automatically, devise solutions, and store them in their memories. Oldsmobile will get the first American production-type four-valve-per-cylinder engine early in the 1988 model run. Ford has started to put antilock brakes in some of its cars and pickup trucks—an excellent innovation for safer stops. But Japan and Germany are still out in front in solid engineering improvements. Detroit isn't finished playing catch-up yet. ■

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FEBRUARY 16, 1987

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THE NO. 1 CAUSE OF EXECUTIVE GUILT

Who's Taking Care of the Children—and How Will They Turn Out?

An Exclusive FORTUNE [illegible]

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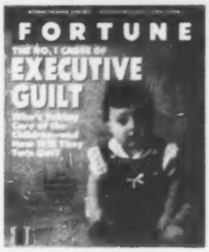
Looking Ahead



William Coupon photographed this 5½-month-old baby girl. See page 30.

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LOOKING AHEAD/COVER STORY

EXECUTIVE GUILT: WHO'S TAKING CARE OF THE CHILDREN?

And how will kids raised by nannies and in day care centers turn out? Worries are being aired from corporate boardrooms to Congress to Doonesbury cartoons. ■ *by Fern Schumer Chapman*

CONRAD LUNG, 37, vice president of Amtex Sportswear Inc., used to go to his Manhattan office every day a profoundly unhappy man. The source of his pain was the source of his joy: Jennifer Lung, his then 1-year-old daughter. Lung's wife, Yin, also works for Amtex, as manager of operations, and little Jennifer spent 11 hours a day in a child care center near the family's house on Long Island. Says Lung: "I had a lot of trouble concentrating on my job. I had this image of my girl crying, and it wouldn't leave me." He thought about quitting to stay home. After his parents moved next door and took over as babysitters, his mind went back to work. But, he says, "the guilt has not disappeared completely."

The first, heady, breaking-new-ground phase of the social experiment called dual-career parenting seems to be ending. In its place: a more reflective, and troubling, stage. More and more parents are asking whether the higher salary, bigger title, or extra professional recognition can make up for leaving a toddler in tears each morning, or returning to a teen who is hurt and angry each night. Even parents who can afford the best child care worry that it will not provide the warmth and doting attention they remember having as children. In a recent study of corporate women officers prepared by the executive search firm Heidrick & Struggles, the respondents ranked quality time with children as the primary personal sacrifice they made because of their careers.

Management psychologists agree that nothing tugs more insistently at executive psyches these days than the fear of shortchanging the kids. Garry Trudeau, cartoonist and father of three, captured the feeling in a recent Doonesbury strip. A child being picked up from a day care center tells his mother: "I was crying because all the other children went home and you were late again, but Mrs. Wicker gave me Oreos and let me watch cartoons and I called her 'Mommy' by mistake." The mother looks at her child and says, "You play hardball, kid." The issue of who should take care of the children is fast emerging as the No. 1 source of executive guilt. Says Dr. Lee Salk, professor of psychology in psychiatry and pediatrics at New York Hospital–Cornell Medical Center: "Guilt is what parents are coming to talk to me about."

Nor is personal guilt the only worry. Sociologists, child psychologists, and other social scientists are analyzing how children raised by babysitters and in day care centers will turn out. The notion that society would benefit if infants were able to spend their first few months with their parents is driving a new bill in Congress called the Family and Medical Leave Act. Warns Salk: "Unless we provide good-quality child care, we are going to see more problems in adolescents. These kids are going to say to their parents: 'Why should I listen to you now when you weren't there when I needed you?' "

Corporations are beginning to discover that more and more of their most valued employees are willing to sacrifice work time, productivity, and possibly even careers to devote themselves to family matters. To see how working couples handle the conflicting pressures of raising children and holding down jobs, FORTUNE commissioned a survey of 400 men and women with children under 12. The study, the first nationwide look at the relationship between child care problems and productivity, was conducted in coordination with New York's Bank Street College of Education and the Gallup Organization. FORTUNE asked questions about child care, stress symptoms, and job satisfaction. Based on the answers, Bank Street analysts measured the causes of certain parental anxieties and how they carry over into the workplace.

THE RESULTS, which appear in part in the table on page 35, show that fathers are sharing not only family responsibilities but also the worry, stress, and guilt associated with leaving the child in someone else's care. Fathers were almost as likely as mothers to say that the job interferes with family life. And they were even more inclined to sacrifice career opportunities that would cost them time away from their family. Nearly 30% of the men in the survey said that they had refused a new job, promotion, or transfer because it would have meant less family time; 25.7% of the women gave the same response. Almost 25% of both men and women sought a less demanding job in order to spend more time with their families.

A recent Stanford University study showed that husbands of dual-MBA couples have more anxiety about the children than their wives do. Says Thomas W. Harrell, professor emeritus of applied psychology, who conducted the study: "A stay-at-home wife seems to insulate husbands from some of the stresses." Michael Nicolo, purchasing manager at Campbell Soup Co., in Camden, New Jersey, says he's proof of that theory. When his two boys were younger, he spent much of his work time worrying about them at

REPORTER ASSOCIATE *Susan Caminiti*

ANDY FREEBERG

their day care center. However, he was quite at ease when his wife, Diane, who works part time, was with them.

Parents generally do not wear their guilt on their sleeves, and those answering the FORTUNE survey were no exceptions. Most said they were very satisfied with the child care solutions they had found and were convinced that the children of dual-career couples are more independent, more socially adept, and have interesting role models for parents. But they also admitted to many anxieties: 61% worried that children were rushed to conform to parents' schedules, and 57% were concerned that children did not get enough attention.

More important, the survey showed that child care responsibilities take a toll on productivity. Some 41% of parents in the survey lost at least one day's work in the three months prior to the poll to care for family matters—tending a sick child or going to a school play--and nearly 10% took three to five days off. Ellen Galinsky, director of Work and Family Life Studies at Bank Street, who designed the survey with colleague Diane Hughes, figures that these results will surprise most managers, since they show that in some cases child care is as strong an influence on a worker's performance as such predictable motivating factors as the number of hours worked, the relationship with a supervisor—and even job security. Says Galinsky: "Our major finding is that problems with child care are the most significant predictors of absenteeism and unproductive time at work."

One glimpse of the productivity costs comes from a recent book, *Childcare and Corporate Productivity*, by John P. Fernandez, a manager of personnel services at AT&T. Fernandez found that 77% of women and 73% of men he surveyed take time away from work attending to their children—making phone calls, ducking out for a long lunch to go to a school play. That alone translates into hundreds of millions of dollars in lost output for U.S. corporations, he says.

Working parents seem to be trying to assuage their guilt by cutting corners on the job—and that vexing situation is not likely to change. The typical American family, with dad at work and mom taking care of the kids, is mainly the stuff of Ozzie and Harriet reruns. Less than 33% of families follow the Nelson family model, vs. 48% 11 years ago,

Security is a father's leg *for Benji Walker, 2, as he starts a day at My Other Mother's, a child care center in Alexandria, Virginia.*

according to the Bureau of Labor Statistics. Nearly half the work force is made up of two-career couples and single parents. Of mothers with children under 3, 45% have jobs. And in a dramatic departure from the old ways, nearly half the mothers with children less than 1 year old work. Some women do it for personal gratification; career opportunities for women are greater than they ever have been. Others work because they must: One family in six is headed by a single, divorced, or widowed woman.

Infants as young as six weeks *are enrolled at My Other Mother's, a nonprofit center that promotes its "loving developmental learning program to meet the needs of contemporary families."*

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Most of the people responding to the FORTUNE survey said they did not have much trouble making child care arrangements. But one of three parents of infants, and one of four parents of 3- to 5-year-olds, reported that finding care was difficult. About one-quarter of the fathers and mothers chose day care centers for their 1- to 5-year-olds. The next most popular solutions: a babysitter who works in the house, and so-called family day care in someone else's house. Not surprisingly, one-quarter of the parents of infants said they left them with relatives.

But parents, including those who count themselves happy with their child care, often have little way to really know how good the care is. Toddlers and even preschoolers cannot reliably report whether they have been treated with sensitive attention or blasé indifference.

Quality in day care centers varies enormously. States license the private for-profit and not-for-profit centers, but not those run by public agencies and, often, religious organizations. Regulations in some states, however, tend to govern simple criteria—the height of children's tables, the number of toilets—and ignore such important matters as learning activities or the teacher-child ratio. Wages tend to be low—an average of $8,000 a year for child care providers—and turnover is high, about 40% a year. Says Lawrence Schweinhart of the High/Scope Educational Research Foundation, a nonprofit child care development group in Ypsilanti, Michigan: "A parking lot attendant is paid the same as a child care worker. If we assign the same importance to someone who parks our cars as to those who take care of our children, we have a serious social problem."

The parents who have most control over child care are those who can hire their own help. A nanny, babysitter, or housekeeper who stays with the child during the day is perhaps the most convenient form of child care. Parents do not have to bundle baby up and schlep halfway across town at dawn. The child has all the comforts of home, and the opportunity to monopolize one person's attention. But this is an expensive solution. A Conference Board survey of child care costs in major U.S. cities found that nannies who come for the day charge $165 to $200 a week in Dallas, Denver, and San Francisco, and as much as $340 in Boston. To get around the high costs, some families sponsor immigrants to work as babysitters; others risk tangling with the law by hiring illegal aliens.

FOR LIVE-IN HELP the fee is less, about $150 a week, since it includes room and board. Many so-called live-ins are *au pairs*, young women from Europe or rural parts of the U.S., who take the job as much for the experience of living in another part of the world as for the money. *Au pairs* in the program sponsored by the American Institute for Foreign Study, a Connecticut-based nonprofit outfit, get $100 a week for 45 hours of child care and light housekeeping; parents also pay the organization $55 a week. Another program, organized by the Experiment in International Living, charges the same fees.

Family day care, in which typically a half dozen children are supervised in a neighbor's house, has several advantages: the same adult every day, a chance for socialization, and economy. Some states license these centers; others regulate only homes that take in more than five children. Family day care costs about $50 to $100 a week on average for a child under 5.

Institutional day care centers usually require that a child be at least 2 years old and toilet trained. The Conference Board reports that parents in Atlanta pay $35 to $70 a week for a child under 5, while their New York City counterparts put down $50 to $150. Parents like day care centers because they are reliable and give children an early taste for learning and such social graces as drinking from a cup and sharing. But these centers tend to have inflexible arrival and departure times. And they will not accept sick children, a situation that leads working parents to consider "I don't feel good" the

DAVID STRICK—ONYX

Home away from home: *Barbara Christian hands Jennifer, six months, to Anne Ybarra, then heads to Hewlett-Packard's Cupertino, California, office. Ybarra cares for six children in her house.*

most upsetting four words in a toddler's vocabulary.

The variable quality of child care means that many parents will not be able to shed the nagging doubts about what's going on during those long hours at the office. Whose problem is this? A case can be made that it is not only the parents' but the employers' and ultimately society's. Says Bank Street's Galinsky: "Couples seem to feel that child care is their problem alone. It's not. It's an institutional problem. Families have changed much faster than the institutions that the family relies on."

A growing number of corporations seem to be trying to catch up. About 3,000 companies offer subsidized day care centers, financial assistance for child care, or child care referral services. That's a jump of 50% since 1984. Dana Friedman, senior research associate at the Conference Board, says, "Child care is likely to be the fringe benefit of the 1990s, because being sound for employees, it becomes good for business."

What do employees want from a company in terms of child care help? FORTUNE asked the working parents it surveyed which child care benefits they would like their employers to introduce and which benefits already in place were most valuable. The two did not always correspond. At the top of the wish list are a pair of items that seem to have nothing to do with child care: merit raises and management training. Galinsky explains that the respondents indicated they wanted their compensation tied to performance so that they could spend more money on child care. She also says that the management training the parents had in mind was the kind that makes supervisors more sensitive to employees with child care needs. The next most popular choices were work-family seminars, subsidized child care, ability to use salary deductions for child care, partial reimbursement of child care expenses, and flexible working hours. At the very bottom of the list, employees in the survey ranked resource and referral services, control over work hours, and more part-time work. But the priorities of working parents in companies that already offered many or all of these programs were quite different. They claimed that flextime, the resource and referral service, and control over work schedule were the most valuable company child care policies.

THE MOST EXPENSIVE commitment a company can make to employees with children is to build an on-site day care center. Only 150 companies have taken this step and some, finding the costs too high, have dropped out. Just a few months ago Kerry Clayton, the president of Western Life Insurance in St. Paul, Minnesota, figured on spending $600,000 to renovate a building that would house Western's new child care center. Those plans are now on hold: Clayton says not enough employees were interested. Campbell Soup converted part of a warehouse into a day care center for 120 children in 1983, which is now run by Resources for Child Care Management, a New Jersey company. Campbell says costs for the operation average $60 a week per child; it puts up about 60% of the amount, or $350,000 a year, and the employees pay the rest. The company is planning to build a new facility for a total of 320 children.

The advantages of such a center are obvious. Parents can drop in any time and—perhaps most important—know the corporation

No need to call in sick: *At Chicken Soup, a Minneapolis day care center for ill children, even chicken pox sufferers like Jamie Luecke, 3, center, and Benjamin Brausen, 4½, are welcome.*

ANDY FREEBERG

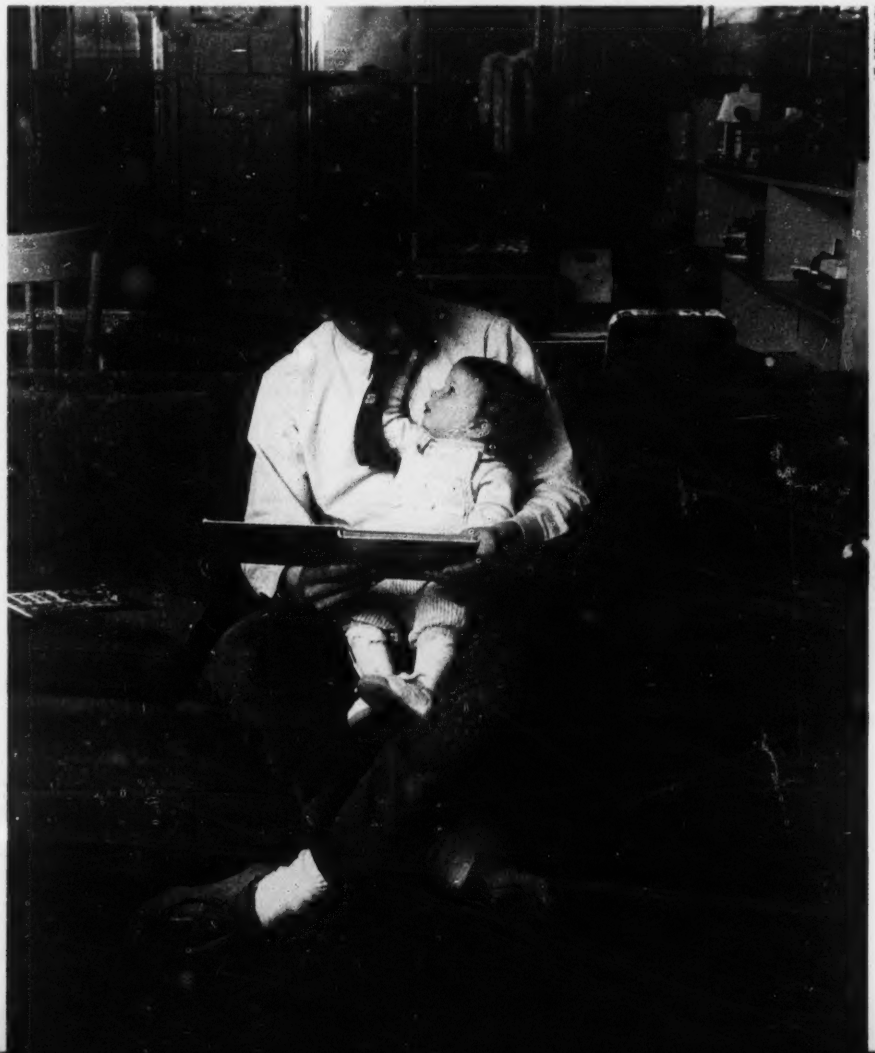
is guaranteeing the quality of the care. Companies benefit too, especially in recruiting and retaining employees. "The day care center swayed me to come to Campbell when I left Johnson & Johnson," says Robert Reveile, a product marketing manager for Swanson Dinners. Alvin Stern, a research scientist at Hoffmann-La Roche in Nutley, New Jersey, placed his three children in the company's center. Says he: "I was a single parent for four years. During that time La Roche supported me. For that, I really appreciate the company."

The problems with on-site day care are not so obvious. Since the centers have limited openings, some employees get preferential treatment. Manufacturers tend to build on-site day care at headquarters where their higher-paid employees work; often no child care is available at the factories. Says Robert Lurie, president of Resources for Child Care Management, a consulting firm: "You find situations where the people using the centers are the well-paid professionals who can afford the fees."

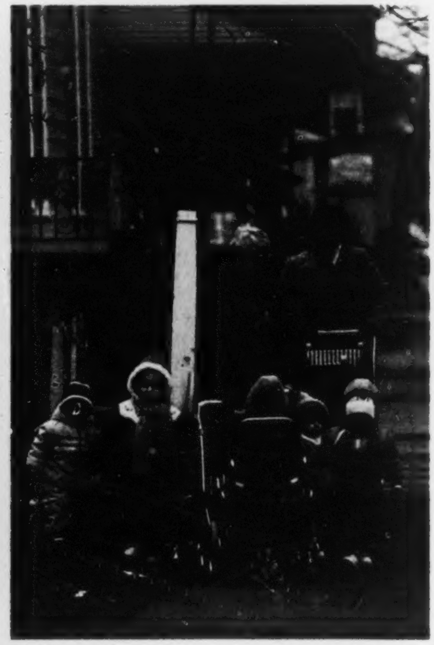
Some companies have found ways to underwrite day care centers without paying the entire bill or taking on the managerial headaches. Merck & Co. provided a grant to start a center in a vacant school near its Rahway, New Jersey, headquarters. The nonprofit center, run by a local group, covers most of its operating costs with fees; the rest comes from fund raising.

STILL MORE ATTRACTIVE for many companies—and far more cost-effective—is a resource and referral service, which trains parents how to find quality child care and screens a community's existing day care facilities. Steelcase Inc., the office furniture manufacturer in Grand Rapids, Michigan, set up this service in 1980 after concluding that starting and operating a high-quality day care center would benefit too few employees to justify its costs. What's more, says James C. Soule, vice president of human resources, "employees want such a diversity of child care services that an on-site center would have been inappropriate." The company employs two consultants who go out to evaluate day care centers and family-care homes. They keep lists of approved centers and babysitters for employees to use. Steelcase also helps employees meet the costs of child care by offering flexible benefits: They can spend part of their nonsalary compensation on child care costs instead of, say, dental insurance. Soule says a recent survey showed that 94% of the employees who used the referral program reported that it made them more relaxed and productive at work.

Companies that do not want to venture into the resource and referral business on their own can sign on one of the specialists in the field that are popping up all over the U.S. IBM contracted in 1983 with the Boston-based Work/Family Directions, a for-profit child care consulting group. IBM has paid the firm to establish 16,000 home-based family centers and open 3,000 group



KEN KERBS (2)



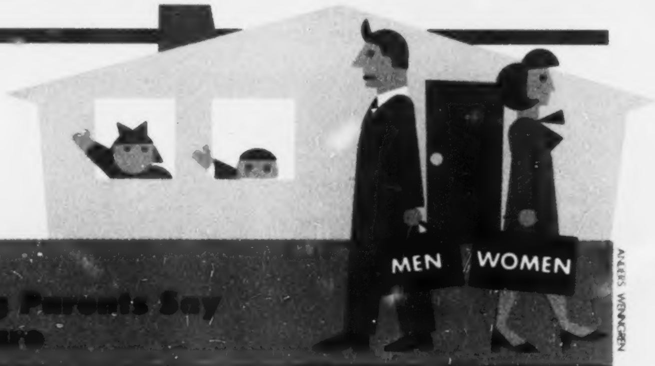
At Merck's *child care center, chemist Robert Wilkening spends his lunch hour trying to read to daughter Rachel, 1, who has a different idea. Other children go for a walk, above. The drug company put up the seed money to establish the center, which is located two miles from its headquarters in Rahway, New Jersey.*

day care centers for IBM employees and other families in communities all over the U.S. Says James Daly, manager of IBM's employee assistance programs: "We believe a company shouldn't go into a community and sap its resources." The BankAmerica Foundation has underwritten a consortium of corporations and government agencies formed to make more and better child care available in five California counties. The three-year-old consortium has a $1.1-million budget for recruiting, training, and helping license day care workers.

For sheer cost-effectiveness, nothing beats a facility for children too sick to go to school or day care centers. About 80 employers, up 50% from a year ago, have made some provision so that the mommies and daddies of cold, flu, or chicken pox sufferers can still report for work. The David and Lucile Packard Foundation and Levi Strauss & Co. funded a 17-bed children's infirmary that is attached to an independent day care center in San Jose, California. Other companies arrange to have trained nurses sent to the child at home. A group of law and accounting firms in Tucson, Arizona, pays $8 an hour for medical aides to hold the hands of employees' sick children. Says Martha Rothman, executive director of Tucson Association for Child Care Inc., a nonprofit child care service: "The employers can't even get a temporary for $8 an hour to replace an absent secretary." First Bank System, a Minneapolis bank holding company, pays 75% of the $26.26 a day for each employee's child who checks in to Chicken Soup, a sick-child day care operation in Minneapolis. Susan Wolfe, Chicken Soup's executive director, figures First Bank loses $154 a day if a $40,000-a-year middle manager misses work to take care of a sick child. She says, "Chicken Soup saves the company 87%, or almost $135 a day."

Companies have devised some innovative ways to help finance child care. Zayre Corp. gives child care reimbursements of up to $20 a week to employees at its headquarters with preschoolers. Cafeteria-style employee-benefit programs, like those offered by Steelcase, are growing more popular. Each year Chemical Bank allows employees to designate up to $15,000 in payroll deductions that can be used for supplementary medical coverage, legal fees, or child care costs. The bank disperses the money once a quarter in pretax dollars.

A FORTUNE SURVEY


ANDERS WENNGREN

What Working Parents Say About Child Care

	MEN	WOMEN
Report that both spouses share equally in child care responsibility	55.1%	51.9%
Say the job interferes with family life	37.2%	40.9%
Sought less demanding job to get more family time	20.5%	26.5%
Refused a job, promotion, or transfer because it would mean less family time	29.6%	25.7%
Felt nervous or under stress in past three months	49.2%	70.2%
Missed at least one workday in the past three months due to family obligations	37.8%	58.6%
Think children of working parents benefit by having interesting role models for parents	77.5%	86.3%
Think children of working parents suffer by not being given enough time and attention	55.4%	58.2%
Would like their companies to provide a subsidized child care center	38.5%	54.1%
Would like their companies to offer flexible working hours	34.8%	54.1%
Think companies can do more to help manage work/family responsibilities	34.5%	30.9%

Though working fathers and mothers pretty much agree that they share equally in child care responsibilities and that their jobs interfere with family life, more fathers say they have refused a new job, promotion, or transfer that would take away from family time. Mothers are more likely to report that they feel stress. Only 30.9% of the women polled in FORTUNE*'s nationwide survey of 400 working parents wanted more child care help from their companies. But over half said they would like their employers to offer flexible working hours and provide subsidized day care centers.*

The worries about child care do not end when the kids are in a place mom and dad feel comfortable about—or even when the toddlers move on through school to adolescence. The big questions, increasingly raised by social researchers: What kind of children are we producing by proxy parenting? How will a generation of kids raised like no other generation before turn out?

FOR ALL THE IMPORTANCE and poignancy associated with the topic, child care research is riddled with problems. The social scientists have not figured out how to separate the influence of child care practices from the many other factors that affect human development. Since the rise of the dual-career couple is relatively new, researchers have not yet produced long-term studies. And the academic literature concentrates on day care centers, paying little attention to other alternatives.

Compounding the confusion, male researchers generally seem to defend traditional child rearing, while their female counterparts more often champion the arrangements that free mothers from the burden. Militant feminists tend to dismiss the possibility that day care may not be an unmitigated blessing; the researchers who worry about day care's effects accuse them of adhering to the old Bolshevik credo that truth is what's good for the revolution.

Still, researchers have come up with a few generalities that most can agree with. One is that happy parents—including those who are

ANDY FREEBERG (2)

Sharing a job, *Kristi Witker, left, and Karen Hasby, right, both mothers of toddlers, had been refused part-time reporter's jobs at TV's Independent News. But when they came up with a plan to split the week—Kristi works two days, Karen three—the station manager agreed.*

happily employed—produce happy babies. Another is that the best child care arrangements are the ones with nannies or babysitters who can most closely simulate the mother-child relationship.

The tenuous consensus rests largely on an important child development theory that is gathering more and more followers. The theory rejects the Freudian notion that children's personalities are molded mainly by dramatic events or transitions through such major developmental phases as the oral and anal stages. Instead, it holds that development takes place in a long continuum of important moments—countless daily exchanges between the mother and the child that shape how the youngster later relates to other people.

The theory does not demand that mom (or dad) stay home with the kids. Says Stanley Spiegel, supervising analyst at the William A. White Psychoanalytic Institute in New York: "What's most important is that the child is given a sense that he is a worthwhile human being." That can come from almost any person who is sensitive to a child's needs, and who has enough time to spend with a child. But this notion raises serious questions about group day care. How can even the most dedicated child care worker provide those exchanges for several children at a time? Deprived of that interaction, Spiegel says, youngsters often lack self-esteem.

The champions of group day care for all children at any age argue that it encourages independence for both the child and the mother. Betty Friedan, feminist and author of *The Feminine Mystique*, for example, insists that children, regardless of age, blossom in child care. "It's good for them to go. It's best for children not to be tied to apron strings and just be at home," she says. Adds Bettye M. Caldwell, professor of education of the University of Arkansas at Little Rock: "Children have a strong urge to be with other children. And study after study shows that children in quality day care don't suffer a cognitive loss or feel any less attached to their parents."

TAKING LEAVE

■ Washington is getting into the child care business. In mid-January the Supreme Court ruled that states could require employers to grant short, unpaid disability leaves for new mothers. But the court ruled against preferential treatment for pregnant women a week later. It said the few states that do not pay unemployment benefits to disabled workers need not give them to women who leave their jobs because of pregnancy. Meanwhile, the House and Senate are about to hold hearings on a bill that would require employers to grant up to 18 weeks unpaid leave for both mothers and fathers.

Parental leave policies at many large corporations are even more generous than the bill would legislate. But barely half of U.S. companies offer extended maternity leaves, and business lobbyists are revving up to fight the bill. Paul Franson, who owns a public relations agency in San Jose, California, argues that maternity leaves are costly and disruptive. In six years the issue never came up among his 45-member staff. Now two women are pregnant and three others are new mothers. He jokes: "We've thought about putting birth control in the water."

THE EXPERTS who disagree are most worried about the effects of parenting by proxy on infants. Two of the most renowned child care experts in the U.S.—Edward Zigler, director of the Bush Center in Child Development and Social Policy at Yale University, and Thomas Gamble, director of the Edmund L. Thomas Children's Center in Erie, Pennsylvania—recently reviewed dozens of the most important child care studies. Their conclusion: "Alternatives to infant care should be made available to working couples who prefer to be with their babies during the first months of life." Their recommendation: a few months of paid leave for both new parents. Jay Belsky, professor of human development at Pennsylvania State University, says infants in day care run the risk of developmental difficulties. They are likely to become aggressive children, tuning out or even resisting the routines of school.

Some studies show that children who spend their early years in day care centers are growing up dismayingly different from those who stay at home. A 1985 study of kindergartners and first-graders who spent their first year of life at the University of North Carolina's highly regarded day care center were found to be more likely to hit, kick, push, threaten, swear, and argue than their home-reared counterparts. In 1983 researchers compared 122 Detroit infants who were cared for in four different settings—at home with their mothers, at home with babysitters, with babysitters outside the home, and in group day care. The study found no differences between babies raised with their mothers or by babysitters, but concluded that group care infants were more apathetic, less attentive, and less responsive and verbal than the others. Those who spent the most hours in day care situations were the least well adjusted.

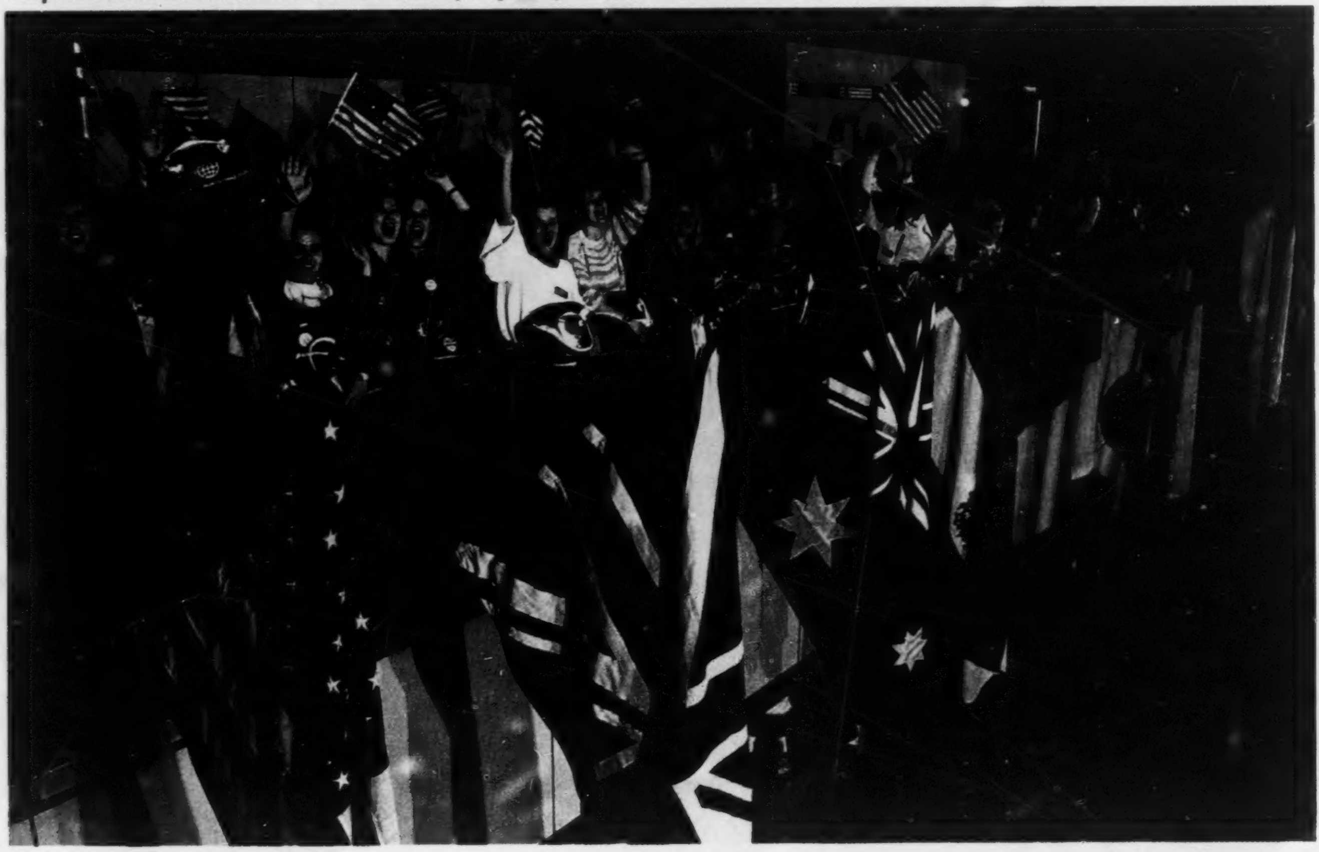
These findings probably reflect the *best* outcomes, since studies are generally conducted in quality day care settings. "The lousy centers won't let a researcher near the place," says Yale's Zigler. In the programs attended by children of low-income families, one worker may tend 18 cribs or place 25 toddlers in front of the television all day. Says Zigler: "If a mother treated her child the way some centers care for children, we'd accuse her of neglect."

EVEN NEGLECTFUL CARE is better than none. Researchers maintain that working parents leave a half-million preschool children at home alone at least part of the day. Child care experts, including those at Work/Family Directions, say that alarming number is a conservative one. In addition, seven million "latchkey" children from 6 to 12 years old fend for themselves after school until their parents return home from work.

So far research on latchkey children has yielded mixed results. Some experts say they learn independence and self-management, while others conclude they are beset by fears, victimized by older siblings, plagued by problems with schoolwork, and inclined to get into trouble. What is agreed is that the youngsters who are forced to stay inside are missing some of the best parts of childhood. Says Dale B. Fink, project associate with School-Age Child Care Project at Wellesley College: "They cannot go into the neighborhood, play hopscotch and baseball with the other kids. It's the difference between being imprisoned and being free."

Society will not know the consequences of the new child-rearing patterns for years. Meantime, the phenomenon of the dual-career couple is not going to go away. Like every generation before them, the dual-careerists will be wanting the best for their children. What they must keep in mind, says Zigler, is that "when parents buy child care, they are not just buying a service that permits them to go to work. They are buying an environment that determines the development of the child." Corporations and society need to keep that in mind too, for the sake of both present and future employees and citizens. ■

Au pairs en masse *arrive at New York's Kennedy Airport. After orientation, the 85 women and two men will meet the families they will work for.*



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PUSHED OUT AT 45— NOW WHAT?

The pain—and the gains—of restructuring corporate America

Like many other managers, Silicon Valley's Joseph Rockom lost his $85,000 job but has bounced back.

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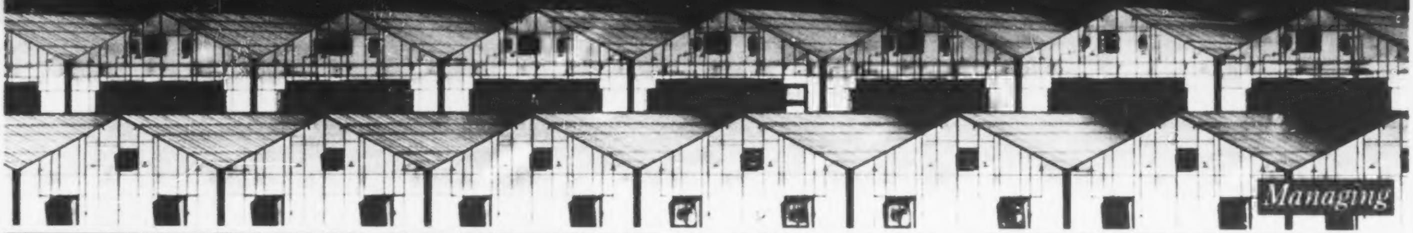

FORTUNE
PUSHED OUT AT 45—NOW WHAT?

Harry Benson photographed Joseph Rockom at Ikos Inc. in Sunnyvale, California, where Rockom is now chief financial officer. See page 26.

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Editor Faltermayer (left) with Nulty and Magnet

WHEN FORTUNE staff members interview corporate chiefs, as we do just about every day, we find that it's a rare C.E.O. who doesn't boast that he has lately cut whole layers of managers. These restructurings, often the product of mergers and takeovers—or the threat of them—have given executive unemployment a communion with the blue-collar variety caused by hundreds of plant closings earlier in the decade. In this issue, FORTUNE investigates the consequences—human and corporate—of the sometimes turbulent process of restructuring. The three cover stories beginning on page 26 come to some surprising conclusions.

The saga of the suddenly separated manager is one that FORTUNE has been researching for a year. Editor Edmund Faltermayer hatched the idea during a lunch early in 1986 with headhunter E. A. "Bill" Butler, who noted that large numbers of *unsolicited* résumés were piling up at his offices. Recalls Faltermayer: "There were stacks and stacks of them, a trove for a research project on executive unemployment."

Late last year, reporter Kathleen Carroll Smyth interviewed 250 who had sent in résumés in the first half of 1986 to learn of their progress in finding new jobs. The results show the resilience of a group of managers who had often assumed they were set for life—56% have landed in new positions.

Writer Peter Nulty and reporter Patricia Langan analyzed the information and interviewed respondents for the story accompanying the survey. Says Nulty: "It's somewhat unnerving to be writing about people who were muscle and then suddenly were redefined as corporate fat because corporation *X* became corporation *XY*."

But as veteran journalist Richard B. Stolley discovered in his story of four such individuals, these corporate refugees are not as bitter as they could be, once the shock subsides. As a result of their job search, Stolley's subjects had become far more self-analytical. "They say they know themselves much better than they did before," reports Stolley. "And I think they like themselves more, too."

No issue sends business people into their ideological foxholes more quickly than corporate restructuring. The third story in our cover package examines whether it is basically good or bad for corporate America. Writer Myron Magnet, assisted by reporter Alan Farnham, interviewed executives on both sides and studied dozens of companies that had gone through mergers, spinoffs, buyouts, and cutbacks. Magnet's conclusion is that for all of its pains, restructuring has brought gains to the economy—gains that may well last for years to come.

Marshall Loeb

MANAGING EDITOR

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PUSHED OUT AT 45 —NOW WHAT?

For many executives let go in corporate restructurings and cutbacks, finding work is the greatest test of their careers. Yet they have not lost spirit, and an exclusive survey shows that most are winding up in new—and often better-paying—jobs.

■ *by Peter Nulty*

For 17 years Joseph Rockom, 47, climbed the rungs of American Microsystems Inc., a semiconductor manufacturer in California's Silicon Valley. Diligence and loyalty won him the rank of vice president and chief financial officer. By mid-1985 the semiconductor industry was in a slump. Rockom's company was hurting, and its parent, Gould Inc. of Chicago, was getting frustrated. "I could feel what was coming," he says. To cut costs, American Microsystems started laying off managers. One morning in January 1986 he was conducting a staff meeting when the division president walked in, postponed the meeting, and escorted Rockom to the president's office. "As soon as I sat down," says Rockom, "I thought uh-oh, I'm getting fired. As the president delivered the news, my mind wandered. I was thinking that in six months I would look back and be glad."

AS IT TURNED OUT, Rockom's quest for a new employer took far longer. And he isn't alone. Tens of thousands of executives are being thrown out of work, even as the economy enters its fifth consecutive year of expansion, in an unprecedented wave of shrinkings and realignments that is part of the restructuring of corporate America. At AT&T, Exxon, General Electric, and other companies once regarded as havens of career stability, the managerial ranks are beginning to resemble those of the Light Brigade after its charge.

Although the casualties continue to mount, executives in imperiled jobs or already out on the street can take heart. An exclusive FORTUNE survey, whose findings appear on page 29, makes clear that most who are shown the door land elsewhere. Sometimes they are better off than before, though not before enduring what the job-hunting executives examined in the story beginning on page 31 have been going through. Most retain a zest for business and a belief that all the upheaval—and the sweeping away of whole management layers, including their own—is for the country's good. The article that begins on page 38 presents dramatic new evidence that this is so.

REPORTER ASSOCIATES *Patricia A. Langan and Kathleen Carroll Smyth*

Talks with severed executives reveal that:

▶ Competition in the job market is fierce.

▶ The most effective way by far to find a new post is through networking—turning to friends and business acquaintances.

▶ Executive recruiters seldom offer much help since their mission is the opposite of placing the unemployed: pulling in the 1,000-pound tunas still contentedly in the swim.

▶ Outplacement firms practically never put anyone in a new job either, but they at least shore up battered self-esteem and provide training and tips that help in the search.

▶ Once a job is secured, the anguish ousted managers felt in their time of trial often turns into appreciation. Some even say the move was the best they ever made. "It was worth it," says a northeastern executive in his late 40s. "I was getting complacent in my old job. When shrubs are transplanted, there is new life and new growth. It happened to me."

More transplantation may be coming. The Bureau of Labor Statistics estimates that between 1981 and 1986, almost 500,000 "executive, administrative, and managerial" workers lost jobs that they had held for at least three years. The numbers are probably increasing as companies now rush to cut costs and raise efficiency.

Out-of-work managers have an easier time than lower-ranking workers do. Of employees displaced since 1981, the BLS says, 72% in the executive group have found new jobs, compared with 64% of the blue-collar and factory workers. Total unemployment averaged 7% last year, but only 2.6% among the executive group. Government statistics, however, give only a blurry impression. The BLS "executive" category includes such people as school principals, construction inspectors, and those who supervise a handful of workers. And the federal data do not convey the difficulty of finding work in a city where whole battalions of managers have been cast out.

To get a clearer idea of what expelled managers face, FORTUNE one year ago asked E.A. Butler & Associates, an executive search firm with offices in several cities around the country, to set aside all unsolicited résumés that arrived in the first half of 1986. Then, late last year, the firm randomly asked a portion of the job seekers for permission to turn over their résumés to FORTUNE. The vast majority agreed, and 250—nearly all male—were queried by telephone about the success of their searches. Most had begun looking between mid-1985 and mid-1986.

The 250 executives included some who said they had not been forced out of their jobs but merely were looking voluntarily for greener pastures. The great majority, however, had been fired or told by their employers to start hunting. These managers probably include a disproportionate number of problem cases. Failing to find work quickly, they have found it necessary to mail out stacks of résumés. The experience of those who admitted to being forced out differed little from that of the voluntary job hunters.

In FORTUNE's survey, 56%, or 141 of the 250 participants, have found new jobs. Another 17% are looking but are still at their old posts. The remaining 27% are the ones in precarious straits: They have left the old job but have failed to find a new one.

Of those who found jobs, only 21% did so in three months or less. But for 66%, the search lasted an arduous four to nine months. And 13% searched from ten months to almost two years. Some outplacement firms warn that clients can expect to spend roughly one month in the job market for every $10,000 in salary they are seeking.

The search gets harder with age, but only up to a point. Among FORTUNE's seekers, those under 35 have a much higher rate of success than the 35-to-44 crowd, which in turn has done better than the 45-to-54s. Beyond 55, at least in FORTUNE's sample, the success rate improves again. This figure may be high partly because only the dedicated job seekers—or the desperate—are still in the labor force. Many executives who are let go at this age drop out of the market and retire.

TO HEAR severed execs tell it, the age problem is entirely in the eyes of the beholders—the prospective employers. Richard Busby, 55, one of those surveyed, was director of purchasing at Goodall Rubber Co. in New Jersey when the company was acquired by Trelleborg of Sweden in 1985. Busby lost his position in a major reorganization. He has a strong job prospect now but says: "I did mass mailings, as many as the computer would spit out. I got a lot of responses, but I think when most saw my age, something went awry."

Fred Holland, 51, spent most of his career with Conoco before becoming president of Irex Corp., a Denver drilling-fund subsidiary of Integrated Resources. After falling prices crippled the oil business, Irex shriveled from 70 employees to 12, and Holland, feeling underemployed, quit. For several months he searched in the oil industry before giving up. "Employers view older men as often set in their ways and hard to manage," he says. "Or, if the older guy is really good, then he's seen as a threat."

continued

"I was naive," *says Joe Rockom, "to think I couldn't be cut." Now he's ensconced as financial chief at Silicon Valley's Ikos Inc.*

PHOTOGRAPHS BY HARRY BENSON

This tale has a happy ending. Holland recently used his other skills—as a highly successful personal investor—to land a job as a personal financial counselor with Lynn Hutchings & Associates in Denver. He says he is glad he will be judged on the value he produces from now on, rather than on his title. This year he expects to make about $25,000 in fees, down sharply from his previous earnings of $150,000, but he believes his income will eventually approach its former level as his clientele expands. It just might do that: Holland figures he has increased his net worth 20-fold over the past ten years, mostly through smart investing.

SURPRISINGLY, nearly half the newly employed executives in FORTUNE's survey have already boosted their income. While the remainder are earning the same or less, many hope to come out ahead because they have been offered more equity participation or their potential bonuses are larger.

Take Thomas Johnson, 52, who used to be president of a Dallas subsidiary of Redman Industries that produces mobile homes. In December 1985 Johnson lost his job because, as he puts it, "There was a health problem: Jim Redman, the chairman, got sick of me." After seven months, networking landed him a position as president of High Chaparral, a manufacturer of prefabricated housing and a subsidiary of Home Savings Association of Midland, Texas. Now Johnson is busily expanding the company from one factory to six. Like most in FORTUNE's survey, Johnson won't reveal his new salary, but says, "While the base is down, the bonus opportunity is up. Home Savings believes in putting a big carrot out there, and I'm working much harder."

When oil slumped, *Fred Holland turned his avocation, personal investing, into a career.*

Most successful hunters bag their quarry by venturing into a different kind of business. In the survey, 62% of the job finders switched industries and 60% are working in smaller companies. Robert Freiburger, 41, used to be a director of manufacturing at a unit of ITT (annual revenues: $12.7 billion) that turns out night-vision goggles used by the military. Now he is general manager of LC Systems, a division of Eagle-Picher Industries ($648 million) producing liquid crystal displays.

Smaller is better, says Freiburger. He was promoted three times in his last ten years at ITT and says he treasures his experience there because it forced him to excel. "But you had to put up with a lot of day-to-day agony. ITT wasn't particularly people-oriented." Eagle-Picher's management, he says, "gives us freedom from constant corporate review of everything. They don't believe in prolific memo writing, policy manuals, and teams of executives descending on you every month. They believe in loyalty of the individual to the company more than larger bureaucratic organizations tend to do."

A few even say they wouldn't want to work for a big company again. James Smith, 47, was a divisional president of the Donald L. Bren Co., a major real estate developer in Irvine, California. He was pushed out in 1985 and now is a partner and senior vice president at Kimball Small Properties, another developer less than half the size of Bren. Smith says he's much more comfortable at the smaller company. "Big corporations don't take care of the needs of their employees. Only the C.E.O.s' needs are important, and they use the corporation as their vehicle. I was never told why I was being let go, and that bothered me tremendously."

Some of the more independent-minded have started their own businesses. Asit Shroff, 42, was a vice president and controller at the Iselin, New Jersey, office of Fleet Finance Inc. Then the New Jersey operation was consolidated with another in Atlanta. Fearing a big loss on the sale of his home and reluctant to uproot his family, he has opened a computer dealership with a friend in Roslyn Heights, New York. Shroff says he's making "close" to what he earned at Fleet and has a 140-mile round-trip commute six days a week. But, he says, "I like being my own boss. I don't regret a thing."

Like Shroff, exactly half the job finders in FORTUNE's survey now perform different tasks from those at their old employers. A slight majority are also supervising fewer subordinates. Some feel a sense of liberation. Johnson of High Chaparral, for instance, used to be insulated from his operations managers by a layer of seven vice presidents. Now he has no vice presidents. "I'm getting in and doing things now," he says, "and having more fun."

JOYS SUCH AS THESE remain an elusive dream for those still on the Long March. As they work into the night cranking out résumés, savings dwindle and phone bills mount. Many are perplexed. They are not society's underachievers and misfits, after all, but winners who steadily advanced to management jobs their companies now deem unaffordable. Laments an executive in his early 40s who never before experienced unemployment: "This is the first time since I was 15 and applying for work in a local store that I have had to search for a job."

E. A. Butler of the headhunting firm, who is also the author of four books of advice for job-seeking executives, thinks many of today's younger executives have a knack for shortening the ordeal. Most job offers that result from prior networking, he says, come in the first 60 days. The yuppie types, he observes, opportunistically grab the first job that comes along and, if it proves disappointing, press on with the search from their new position.

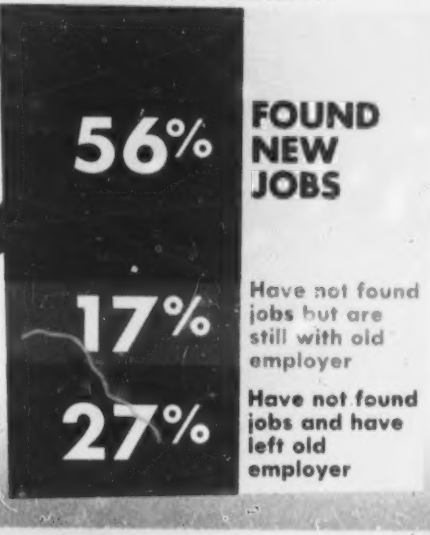
The older crowd is too fussy, Butler says, at least for a while. "The closer they get to retirement, the more careful they tend to be. They think this is going to be the last job, when they really should regard it as the next assignment." At first they want as much money and prestige as they had before. Or their wives don't want to relocate and their families, striving to be supportive, tell them not to settle for less than they think they are worth. Many, Butler adds, have ego problems: "They think the mold was broken after

PROGRESS REPORT

Many executives who lose their jobs line up new ones fairly quickly without sending out a flood of résumés. But a recent follow-up canvass by FORTUNE *of 250 executives who sent résumés in the first half of 1986 to E.A. Butler & Associates, an executive search firm, offers a unique view of the job market. As the charts show, a majority of the seekers, who include some who say they were voluntarily trying to improve their lot, have found work.*

OF 250 MANAGERS WHO HAVE BEEN LOOKING . . .

Most have been successful . . .

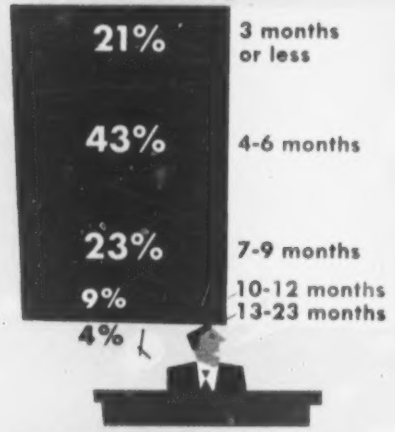


but age makes a difference.

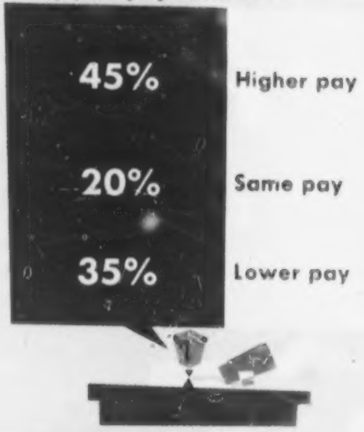
Age	Total seekers	Job Finders Number	Job Finders %
34 and under	19	13	68%
35-44	112	65	58%
45-54	102	52	51%
55 and over	17	11	65%

FOR THE 141 WHO FOUND JOBS . . .

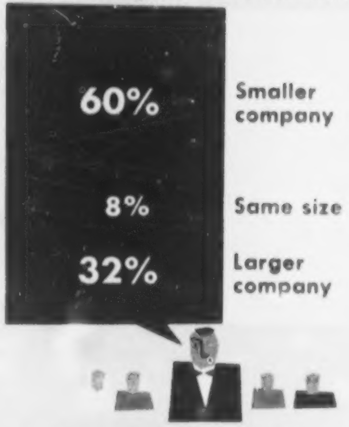
The search was long.



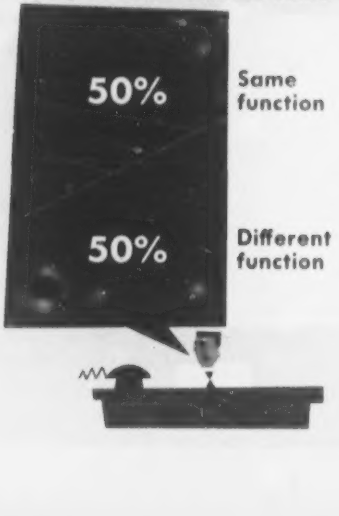
Many jobs pay more . . .



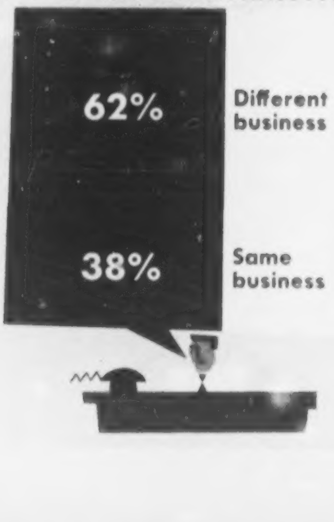
but the companies are smaller.



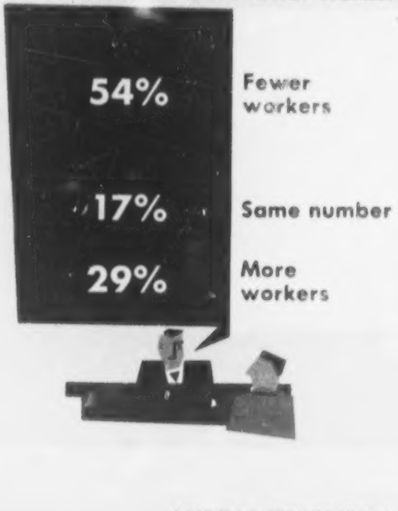
The jobs are often the same . . .



but are in different industries . . .



where the executives boss fewer workers.



ILLUSTRATIONS BY ANDERS WENNGREN

ALAN D. LEVENSON

Back in the swim *with a small real estate developer, Jim Smith enjoys the hot tub with his family.*

they were created. It takes about six months for them to realize what they are up against and get religion. By then valuable time has been lost and they have to explain why they have been out of a job for half a year."

Older executives often neglect networking. Butler guesses that only about 10% of executives in big companies actively cultivate useful acquaintances outside their firm. "They labor at their work and raise their families," he says. Joseph Rockom recalls the awkwardness he felt at first going to friends and business associates. "I thought I was begging, hat in hand. You'd better get over that because people want to help."

Mere common courtesy goes a long way toward keeping a network strong. David Myers, 44, was vice president in charge of loss prevention and safety for Household Merchandising of suburban Chicago, the retailing division of Household International. When the division became independent in a leveraged buyout, about 40 corporate executives, including Myers, were let go. Myers, who saw it coming, began compiling a list of contacts before the ax fell. Says he: "No one is too unimportant to keep in touch with. Nobody's phone call should be ignored. People who don't return calls make a mistake from a business and a personal standpoint by not maintaining contacts. If you end up looking for a job, the most important thing is being able to say: 'Hi, I have a problem, do you know of anything? Here is my phone number.' " Within five months Myers had found a job with the Stop & Shop grocery chain of Quincy, Massachusetts. He is due to succeed one of the people on his network list who will soon retire from a position for which he recommended Myers.

CONNECTIONS, of course, are not everything. A few of FORTUNE's survey respondents got results by sending résumés cold to companies they had carefully screened for operations in their field of business. Freiburger's letter to Eagle-Picher brought a company jet with execs one Thursday to his home town of Roanoke, Virginia. They took him to lunch and offered him a job starting the following Monday morning at a plant in Exton, Pennsylvania. Few get jobs by sending unsolicited résumés to headhunters, though it does happen. But one found salvation answering a classified ad in the *Washington Post.*

Outplacement firms are sometimes criticized for being little more than healing balm for the corporate conscience, but these services got surprisingly high marks in the survey. Of the job finders, 33% used outplacement, and three-quarters of them say it was useful. Its main value, beyond boosting crushed egos, is in coaching people for job interviews. Outplacement firms often provide office space and secretarial services and encourage job hunters to don suits and ties, turn up at the outplacement "office" every day, and view the search as a job. All of these tend to ward off a crippling sense of self-pity.

In October 1985 Gerhard Mietz, 55, lost his position as president of RTE/Delta, a subsidiary of RTE Corp. of Wisconsin. Using the services of Hindman Associates of Louisville, Kentucky, Mietz was trained in interviewing techniques with the help of videotapes. "They shot me in a mock interview and then tore me apart. Boy, was the second interview an improvement." Mietz believes that unless an executive is an experienced job hopper, he's probably not very good at selling himself. "The trick," he says, "is to forget your past glories. The interviewer doesn't care. Find out what he needs in advance or by tuning in carefully to his questions." He credits the training with landing him a position as operations manager of a division of German-owned Siemens Energy and Automation in Raleigh, North Carolina.

One profound effect of all the bloodletting is a serious weakening of the emotional bonds that tied managers to companies. As one of the displaced sourly notes, "The rules have changed; the old loyalty is gone." Vows another: "From this day forward I am who I am going to worry about." Even so, most severed executives retain a zest for business, rather like athletes benched during a game but raring to get back on the field. What they seem to miss as much as the paycheck and the perks is the thrill of bashing the competition. "I want back in the game," says one of the jobless. "That's what races my motor. Pardon my French, but I want to beat the bastards."

And what about Joe Rockom, the man who began this story? He is back on the playing field, but it took some doing. Because he was not a job hopper like many Silicon Valley executives, he had not developed a network of contacts during his 17 years at American Microsystems. But the day after he left, he plunged in. Nine months later, with the help of a venture capitalist he knew, Rockom became chief financial officer of a start-up company, Ikos Inc., a manufacturer of engineering work-station computers. His previous job paid about $85,000. Now he earns $70,000 but has what he calls a "large equity position" in the company. If it succeeds, Rockom could come out way ahead. Formerly he had 80 people reporting to him—"an army," he says. Now he alone watches the money. "I am the army. It's fun."

■ TOMORROW'S OIL CRUNCH • KOREA'S EXPORT DRIVE [redacted] **■**

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FORTUNE

THE COMING DEFAULTS IN JUNK BONDS

WALL STREET'S NEXT SHOCKER

Under Fire: Drexel Burnham's Junk King Michael Milken

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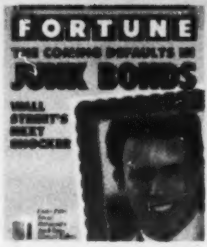
FORTUNE

Looking Ahead



Roger Sandler photographed Michael Milken of Drexel Burnham. See page 26.

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THE EDITOR'S DESK

TIMOTHY GREENFIELD-SANDERS

High-yield experts Ehrbar, Sherman, and Worthy

IT'S JUST after midnight, and I thought you might like to know something of what goes on in the FORTUNE offices on the night before our biweekly closing.

Across the hall, writer Ford S. Worthy and editor Walter Kiechel are applying the final polish to Worthy's remarkable analysis of the coming defaults in the high-yield, low-quality bonds known as junk. Worthy has been at work on this story since Christmas, helped by computer data on more than 500 companies and 1,000 bond issues. For the past two weeks, four of our reporters—Terence Paré, Andrew Serwer, Lorraine Carson, and Christopher Knowlton—have been on the phones double-checking the data directly with the financial officers of over 90 companies that have issued these bonds. The result is just the one-of-a-kind, ahead-of-the-news story that is FORTUNE's trademark.

In the office next to mine, editor Al Ehrbar—who supervised this issue's cover package—and writer Stratford P. Sherman are punching in the last checkpoints on Sherman's story about the trials of Drexel Burnham, the creative and contentious investment banking house that turned junk into gold. Just one example of the scrupulous research that goes into a FORTUNE story: Reporter Rosalind Klein Berlin took seven pages of notes to fact-check a single sentence.

NINA BARNETT

Oil writer Newport

Worthy and Sherman are getting to be rather old hands on the investment banking beat. They wrote the two main stories in our December 22 cover wrap-up of "Wall Street's Spreading Scandal," and Sherman was the author of our all too prescient November 24 cover on "Wall Street's Overpaid Young Stars—Headed for a Fall?" For his story in this issue, Sherman and reporter Cynthia Hutton have been interviewing over 90 Drexel executives, clients, and customers.

Just down the hallway, editor Julie Connelly and writer John Paul Newport are discussing a few late refinements in another unique and penetrating story—about the coming crunch in oil. Newport grew up in Fort Worth, where oil is a way of life. But he has become more expert on the subject in the past month or so, as he and reporter Barbara Hetzer interviewed more than 40 economists, oil executives, and petroleum analysts and read a stack of abstruse reports. That's quite a stack. It reaches up to Newport's waist—and like almost any good Texan, he's 6 foot 4.

Marshall Loeb
MANAGING EDITOR

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MONEY & MARKETS/COVER STORIES

THE COMING DEFAULTS IN JUNK BONDS

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[illegible] ge from huge institutions to [illegible] ■ *by Ford* [illegible]

PHOTOGRAPH BY KENNETH AND CARL FISCHER

LEVINE. Boesky. Siegel. Wall Street's gallery of rogues keeps growing, with every indication of more to come. But while the financial community waits nervously for the next insider trading scandal to break, another kind of shocker is brewing. Not as dramatic, perhaps—no one is likely to be led off in handcuffs—but with effects that ultimately could prove more far-reaching. The threat: an unprecedented level of defaults by the companies issuing junk bonds.

The fallout might rain down even on people who have never heard of these risky high-yield securities. Hundreds of institutions that have loaded up on the bonds could lose money, ranging from insurance companies to savings and loans. So could thousands of small-time investors who have bought shares in junk bond mutual funds. Undermine investors' confidence in junk bonds and you strike at the heart of Drexel Burnham Lambert, whose senior executive vice president, Michael Milken, pioneered their use and revolutionized corporate dealmaking in the process. Put a crimp in the ability of takeover artists to raise financing by selling junk bonds through Drexel or other investment banking firms, and the acquisition game slows down. Fewer companies will be menaced into restructuring, including some that still need to.

True, critics of junk bonds have been prophesying an imminent, cataclysmic wave of defaults for years (the sky is falling, the sky is falling). And true, despite the predictions, this high-yield corporate bond market has merely steamed ahead, proving amazingly resilient when bumps did occur. It bounced back after two jolts in 1986. In July, LTV, the giant steelmaker, went into Chapter 11 and stopped payment on bonds with a face value of $2.1 billion, the biggest junk default ever. Then came the revelations last November that Ivan Boesky, a big Drexel customer, had connived in illegal insider trading and was now cooperating with government investigators in search of other malefactors. Prices of junk plummeted after each debacle, but rebounded impressively, enabling the overall market, as measured by a Drexel Burnham index, to sport a healthy 19% total return for the year.

This time around it may be different. FORTUNE has made one of the first comprehensive attempts to find out how shaky the junk bond market really is. The answer: not as bad as some Chicken Littles have been saying, but much more worrisome than the defenders of junk would have us believe. The market for junk bonds won't collapse, but it could be rocked to its foundations.

In an effort to gauge the potential problem, FORTUNE enlisted the help of Houlihan Lokey Howard & Zukin, a Los Angeles consulting firm nationally known for its work in analyzing the solvency of companies. The firm scrutinized a universe of about 500 companies that altogether had junk bonds with a face value of $72.5 billion outstanding at the end of 1986. Studying these, it identified 36 companies whose bonds, with a face value of $4 billion, seem particularly vulnerable. Looked at another way, some 5.5% of the junk bonds in our sample appear to be vulnerable. At first glance, 5.5% might not appear that threatening. Look again: It's over three times the historical rate of default for publicly traded junk bonds, around 1.5% a year, which Drexel and others have harped on in touting the securities.

Put a crimp in the ability of takeover artists to raise money with junk bonds, and the acquisition game slows down.

These atomic bonds, as Houlihan Lokey calls the riskiest of them, are not necessarily destined to blow up or melt down. Many of the companies that issued them will undoubtedly find ways to survive: by bringing in new management, selling assets to repay debt, winning concessions from lenders, or selling out to stronger companies. Indeed, Drexel officials, who have expressed disdain for FORTUNE's project, say that the prospects for many of the companies listed here are so good that savvy investors would do well to view them as buying—not selling—opportunities. *Caveat emptor.*

To understand the danger that junk bonds present now, you have to understand the nature and history of the beast. The two major bond-rating agencies refer to junk securities—those rated BB+ or below by Standard & Poor's, or Ba1 or less by Moody's Investors Service—as "speculative grade." Drexel prefers the appellation "high yield." By any name this is the riskiest of all marketable corporate debt. But the spectrum of risk within the junk market is incredibly broad. For example, B.F. Goodrich Corp. junk bonds currently yield about 9% a year, an indication that investors regard them as much less risky than certain Bethlehem Steel bonds, which if bought today and held to maturity would, God willing, yield nearly 17%.

Junk bonds represent about $145 billion of the $550-billion totality of all corporate bonds. Approximately $125 billion of junk is what's called straight debt, bonds whose holders receive regular fixed-interest payments, typically every six months, until maturity, when the principal is repaid. Holders of convertible debt (about $20 billion outstanding) have the option to exchange the bonds for other securities—usually common stock. About a third of all junk bonds are "fallen angels" that began life with investment-grade status and grew riskier as the issuer's fortunes declined. The other two-thirds were junk from day one.

The market for junk has grown wildly—from about $1.5 billion worth of lesser-quality bonds issued in 1978 to $7.4 billion in 1983 to $48 billion last year—largely because of the super-salesmanship of Drexel's Milken, the preeminent figure in corporate finance today. From his offices in Beverly Hills, Milken convinced investors that the expected yield on a diversified portfolio of junk bonds *over*compensated them for the risks entailed. Such bonds are bought and sold mostly on the basis of the spread between their yield and the yield on risk-free government bonds. A typical junk bond portfolio yielding, say, 11%, currently enjoys a spread of about four percentage points over the 7% yield investors can earn on government bonds of similar maturity. In theory the spread owes to the likelihood that the junk portfolio will suffer losses over time, for instance as individual bonds default.

MILKEN'S GENIUS was to recognize that in any year only a tiny percentage of companies issuing such bonds had failed to make an interest or principal payment on time. Moreover, bonds that do default lose only a portion of their value. As long as history repeated itself, an investor with a diversified portfolio of junk could expect his total return to be reduced by default losses of just one percentage point a year. Junk bonds seemed to promise free money, Milken and his fellow Drexel salesmen told their clients, because even after subtracting expected default losses, total returns from junk would be far higher than risk-free Treasury bonds.

REPORTER ASSOCIATES *Lorraine Carson, Christopher Knowlton, Terence Paré, Andrew Evan Serwer*

Portfolio managers for insurance companies, pension funds, and mutual funds quickly caught on and poured money into the high-yield sector as never before. Everything else being equal, the flood of new money should have caused the interest rate spread between junk bonds and government bonds to narrow. Instead—and ominously—when interest rates on Treasuries and high-grade corporates began to fall a couple of years ago, yields on junk held steady. The wider spread was the market's way of saying that junk was getting trashier.

In their rush to invest, some institutional money managers skipped the exhaustive research that they customarily perform before buying risky issues, relying instead on the strength of the underwriter's endorsement. Many simply didn't have a sufficient number of qualified analysts to thoroughly screen the hundreds of new issues coming onto the market or to closely monitor the scores of issues already in their portfolios. In addition, junk issuers and their bonds proved to be

Too Hot to Handle?

While these junk bond issuers are the shakiest in our sample, they aren't all going to default. Some will scrape by, perhaps with the sort of exchange offer Drexel Burnham has pioneered for clients. Total debt includes bank debt.

ATOMICS

COMPANY	PRIMARY UNDERWRITER	DEBT/ EQUITY RATIO	TOTAL JUNK BONDS in millions	TOTAL DEBT in millions
Allegheny Beverage	Smith Barney	5.9	$192	$381
American Healthcare Management	Drexel Burnham	12.8	$80	$435
Cannon Group	Drexel Burnham	7.8	$243	$596
Care Enterprises	Drexel Burnham	4.2	$68	$179
Compact Video	Drexel Burnham	3.9	$80	$174
Consolidated Oil & Gas	None	14.8	$42	$104
Consul Restaurant	Piper Jaffray	3.7	$21	$26
Lifestyle Restaurant	L.F. Rothschild	2.9	$12	$16
Michigan General	Drexel Burnham	5.6	$110	$146
Pay 'N Save	Drexel Burnham	3.5	$295	$343
Pennsylvania Engineering	None	10.9	$12	$86
Penril	Drexel Burnham	3.2	$18	$35
Po Folks	Kidder Peabody	4.4	$16	$75
Pope Evans & Robbins	Bear Stearns	2.8	$35	$39
Preway	Drexel Burnham	10.3	$56	$60
Quanex	Drexel Burnham	2.5	$103	$112
Reading & Bates	Smith Barney	5.1	$60	$486
Spendthrift Farm	Prudential-Bache	3.7	$30	$44
Texas International	Drexel Burnham	2.8	$190	$298
Thousand Trails	Prudential-Bache	6.9	$57	$188
Wean United	None	3.6	$27	$37
Western Union	Salomon Brothers	3.9	$526	$924
Westworld Community Healthcare	Drexel Burnham	15.2	$65	$123
Winners	Prudential-Bache	3.5	$25	$49

Handle With Care

A little less risky than atomics, the subatomic bonds of these companies still need to be approached with caution. Like the atomics, they're vulnerable, not necessarily doomed. Virtually all bonds outstanding are junk grade.

SUBATOMICS

COMPANY	PRIMARY UNDERWRITER	DEBT/ EQUITY RATIO	TOTAL BONDS OUTSTANDING in millions	TOTAL DEBT in millions
Arrow Electronics	Bear Stearns	2.2	$110	$164
Ducommun	Donaldson Lufkin	2.8	$35	$160
Kaneb Services	Smith Barney	2.0	$55	$185
Kay	Bear Stearns	3.1	$10	$165
Lear Petroleum	Drexel Burnham	6.5	$196	$266
MCO Holdings	Drexel Burnham	4.5	$81	$327
Price Communications	Morgan Stanley	3.4	$375	$447
Radice	E.F. Hutton	3.3	$34	$168
Service Merchandise	Merrill Lynch	3.6	$300	$904
Texstyrene	Drexel Burnham	2.3	$50	$82
Universal Health Services	Morgan Stanley	3.0	$85	$333
Valero Energy	Shearson Lehman	3.4	$277	$897

complex creatures that sometimes didn't lend themselves to analysis with traditional financial models. An executive at one rating service says that more than a third of the money managers he advises don't do any independent research on the bonds they buy.

HAD THEY DONE their homework, they might have been wary of that low historical default rate. To begin with, the default rate for publicly traded junk debt—which averaged 1.5% annually for the period 1974-86, according to New York University finance professor Edward Altman—is based in part on years when the total amount of junk was paltry by today's standards. Nearly two-thirds of all outstanding junk bonds were issued in just the last three years, roughly half in the last two years. As Altman notes, it generally takes a few years for even the worst junk to spoil, so the most recently issued stuff hasn't had a real chance to affect default rates. Nor has the junk of recent vintage had to weather a downturn in the economy.

More important, the nature of the bonds in the market appears to have changed significantly in the past few years. In 1986 an estimated $12 billion in new junk bonds—roughly 25% of all the junk issued—was sold in connection with leveraged buyouts, those extra-risky transactions where new owners essentially hock a company to buy it. In previous years LBO-related bonds represented such a small portion of the market that nobody bothered to keep statistics on them. It's not uncommon for LBOs to have nine parts debt for every one part equity, a recipe that few companies can live with for long. The people who do LBOs count on being able to swiftly pay down that debt by selling off some of the company's assets. "Everybody in an LBO deal is going for a quick home run," says a New York banker. Lots of junk owners could go down swinging if a recession slows down that resale market.

Most default statistics also fail to take into account instances where issuers come within an eyelash of bankruptcy before some sort of rescue mission saves them. Among the most common rescue operations is the exchange offer: A company gives its bondholders new securities in exchange for the old bonds. A company out of cash and on the brink might ask its bondholders to accept new bonds that carry a lower interest rate, or permit interest to be paid in stock rather than cash. Says Ray Minella, who runs Merrill Lynch's high-yield operations: "Most such exchange offers are bankruptcies without the benefit of a judge."

James A. Schneider, a Drexel executive and an expert on exchange offers, says that the idea is to give the ailing company enough time to get to a "better doctor"—an outside investor, perhaps, who's willing to give the company a big infusion of equity. If the patient goes on to survive, the investors who hang on to the bonds can do quite well. But many investors choose to sell out, often at prices less than 50% of the face value of their bonds. That's so close to what bonds sell at

ILLUSTRATIONS BY STEVEN GUARNACCIA

just after defaulting—typically around 40% of face value—that some analysts refer to emergency exchange offers as "soft defaults." But these soft defaults don't show up in the historical rate.

The historical rate of default nonetheless continues to be the centerpiece of the case that Drexel and others make for junk bonds as a safe investment. Says Larry Post, Drexel's co-head of high-yield bond research: "Unless you think the overall credit quality of the market has gone down, there is no reason to believe that default rates in the future won't be similar to those of the past."

But that larger spread between junk and high-grade bonds suggests that the overall credit quality *has* gone down. Other evidence points the same way. For instance, the proportion of new junk bond issues landing in Standard & Poor's or Moody's lowest-rated categories or going unrated has increased from 6.3% of new issues in 1980 to over 40% last year, according to IDD Information Services, a research firm.

No one has a perfect formula to measure the risk that a company will default on its debt. S&P and Moody's, in making their judgments, consider a broad range of financial data reflecting both the company's past performance and management's projections for the future. They also make more subjective assessments: How sound is management? How likely is potential litigation against the company?

WHILE those judgments may be quite valuable, FORTUNE asked Houlihan Lokey to devise a more rigidly objective series of measures to spot especially vulnerable companies. The approach that resulted relies heavily on how the marketplace values a company's stock. Says Marko A. Budgyk, the Houlihan Lokey analyst who developed and managed the study: "We believe that by looking at a company's stock price, you can get a very accurate reading of how investors perceive the company's prospects. In effect, you've got a million different investors telling you what they think of management, of that potential strike on the horizon, of that new product the company intends to conquer the world with."

Houlihan Lokey combed through both Standard & Poor's and Moody's bond guides for January, identifying companies with at least one straight or convertible bond outstanding that either agency rated as junk. From that sample of 792 companies, representing $125 billion in junk, it eliminated firms whose $33 billion of junk bonds are publicly traded but whose common stock is not. The study also excluded electric utilities, representing $11 billion in bonds, and banks and other financial services compa-

Sunken Junk

The junk bonds of these companies have defaulted since January 1, 1986, and remain in default. Note the absence of Drexel Burnham among the underwriters; it rescues many clients before default.

DEFAULTED COMPANIES

COMPANY	PRIMARY UNDERWRITER	TOTAL BONDS IN DEFAULT in millions	TOTAL DEBT in millions
Argo Petroleum	Shearson Lehman	$35	$66
Chapman Energy	Thomson McKinnon	$22	$45
Digicon	Paine Webber	$55	$113
ICO	Prudential-Bache	$30	$45
Kenai	Offerman	$73	$77
LTV	Merrill Lynch	$2,100	$2,800
McLean Industries	First Boston	$243	$1,089
Smith International	Morgan Stanley	$73	$498
Texas American Oil	E.F. Hutton	$23	$39
Towle	Salomon Brothers	$25	$68
Wedtech	Bear Stearns	$115	$140
Western Co. of North America	Smith Barney	$38	$374
Zapata	Shearson Lehman	$78	$663

nies, another $9 billion. Both have characteristics that make comparisons with industrial and nonfinancial service companies of little value. Finally, there was no way to assess junk bonds issued in private placements, a category that represented $23 billion in new issues over the past two years, according to Merrill Lynch.

Houlihan Lokey next evaluated the remaining junk bond issuers in terms of three market-based criteria: the total market value of the company's stock and equity equivalents, the volatility of its stock price, and its leverage. The analysts calculated each company's leverage, dividing total debt by the market value of the equity. Total debt figures were based on the most recent quarterly financial statements. For the equity part of the ratio, Houlihan Lokey used the market value of each company's equity on January 30. FORTUNE subsequently asked each company to confirm its debt and equity figures; if a company reported significant changes on its balance sheet since its last financial statement, we used the fresher numbers.

AS A COMPANY'S leverage increases, its ability to service its debts usually declines and the risk of default rises. In the view of Houlihan Lokey and most other experts, big companies, with more equity outstanding, are able to tolerate higher leverage than their smaller counterparts. Small companies—those with equity of less than $100 million—were considered vulnerable if their debt-to-equity ratio exceeded 2.5 to 1. Companies with between $100 million and $250 million in equity were considered vulnerable if their leverage was more than 3 to 1. For companies with equity of $250 million to $500 million, the cutoff point was 4 to 1; for companies larger than that, 5 to 1.

To show up on the final lists, a company with that high leverage had to meet yet another test. Houlihan Lokey took a reading of the relative stability of each company by measuring the price volatility of its common stock over the preceding six months. The higher a company's volatility, the greater the daily changes in how investors expect it to perform in the future. In general, companies with high volatility are perceived to be riskier than companies with low volatility.

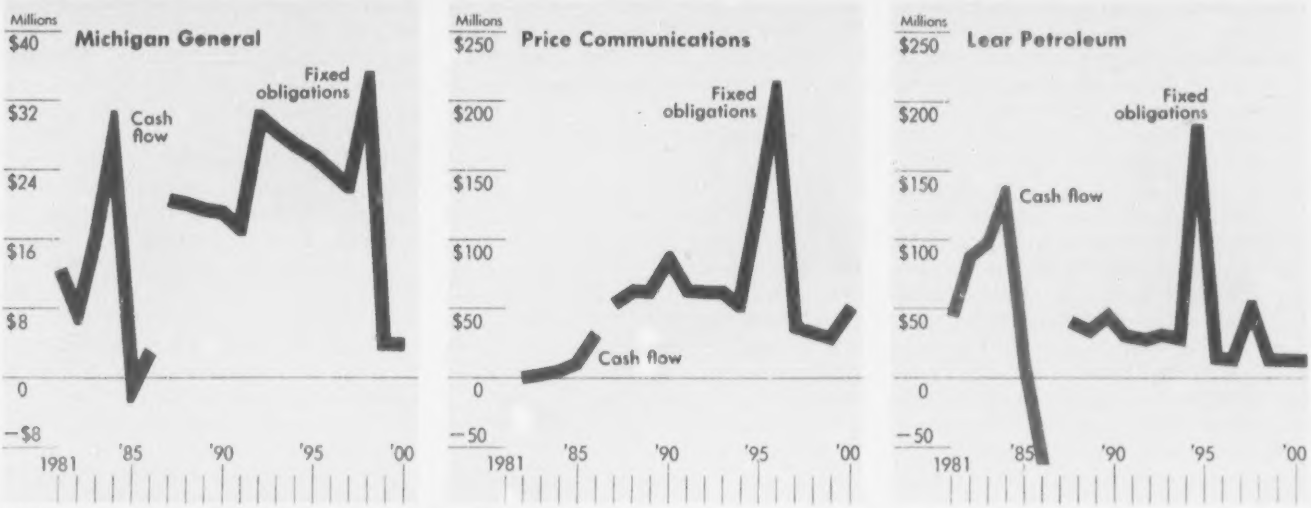
What emerged from this sifting and resifting were 24 "atomic" companies whose junk bonds are highly vulnerable to default. Twelve others, either not so highly leveraged or not so volatile, were judged by Houlihan Lokey as slightly less risky, but sufficiently dicey to qualify as "subatomic." Again, this does not necessarily mean that the companies are going to default. But they do appear to face substantially higher risks than their peers within the world of

Top of the Junk Heap

More like investment-grade outfits than junk, these companies have low leverage, low stock-price volatility, and a lot of equity. Indeed, the junk bonds of some of these companies might end up being upgraded.

QUALITY JUNK

COMPANY	PRIMARY UNDERWRITER	DEBT/ EQUITY RATIO	TOTAL JUNK BONDS in millions	TOTAL DEBT in millions
Caesars World	Drexel Burnham	0.8	$233	$495
Castle & Cooke	Goldman Sachs	0.4	$173	$455
Circus Circus	Drexel Burnham	0.2	$75	$180
Federal Paper Board	First Boston	0.6	$144	$472
Fuqua Industries	Shearson Lehman	0.5	$159	$311
GAF	Drexel Burnham	0.3	$486	$486
GenCorp	Kidder Peabody	0.1	$103	$208
B.F. Goodrich	Goldman Sachs	0.4	$92	$489
Rorer Group	First Boston	0.5	$326	$452
Tele-Communications	Drexel Burnham	0.8	$505	$2,163
Telex	Drexel Burnham	0.1	$21	$106
Texaco	Salomon Brothers	1.0	$6,722	$9,394
United Brands	Drexel Burnham	0.2	$96	$135
Whittaker	Dominick & Dominick	1.0	$44	$268



Where Will the Money Come From?

These spiky graphs compare approximations of each company's operating cash flow over the past five years with the Houlihan Lokey firm's estimates of how much cash will be needed in the future to cover their fixed obligations. These include interest on their debt, the principal as it matures, and dividends on preferred stock. The case of Price Communications illustrates one shortcoming of this kind of analysis: According to its most recent available balance sheet, the broadcasting company has approximately $200 million of cash it could use to pay down debt. The graph doesn't reflect that.

junk. Houlihan Lokey didn't estimate probabilities of default, nor did it predict when default might occur.

The main strengths of the Houlihan Lokey approach stem from its reliance on the information captured in a company's stock price. Larry Post of Drexel has used a similar approach, in fact, in analyzing junk bond issuers for almost ten years. But as Post and others point out, the method has its limitations. For example, debt is sometimes structured so that the issuer can make interest payments in the form of shares of stock during troubled times, thus conserving precious cash. And companies don't make any cash payments on zero-coupon bonds until the bonds actually come due. In such cases, companies may find extraordinarily high leverage quite tolerable.

Houlihan Lokey's method also fails to consider the amount of cash a company has in the bank—"Cash being one of the best ways I know of," Post observes, "to make the interest payment on a bond." The towering pile of cash currently on the books of Revlon Group, a company that narrowly missed the cutoff for subatomics, is a big reason that the bond research firm McCarthy Crisanti & Maffei rates the company as having a mere 2% chance of default in the next two years. But, says Philip Maffei, noting that Revlon is controlled by the acquisitive Ronald Perelman, "you can't assume that all that cash is just going to sit there for the benefit of bondholders." That's why his rating firm believes the possibility of a Revlon default in the next *five* years is closer to 10%.

These important caveats aside, the companies on FORTUNE's list include some real prizes. Even as Houlihan Lokey was doing its initial sorting, Chapman Energy, a Dallas oil and gas company, defaulted on junk bonds with a face value of $22 million. Spendthrift Farm, a Kentucky horse-breeding operation that's an atomic, and subatomic Kaneb Services, an oil services company, both announced that they expect not to make interest payments due later this year. Says Kaneb's vice president, Robert Pando: "That's why they call them high-risk bonds."

NOT SURPRISINGLY, most of the companies listed as atomic or subatomic are working overtime to bolster their balance sheets. In the past year, several have exchanged some of their old bonds for new ones with terms more lenient to them. Others, including Westworld Community Healthcare, are planning exchange offers. Lear Petroleum paid off enough bank debt in early January to transform itself from an atomic company to a subatomic.

Many executives at the listed companies took strong issue with Houlihan Lokey's methodology. Others argued that in going purely by the numbers the study failed to consider important mitigating factors. For example, Valero Energy, a subatomic, plans to spin off its natural gas pipeline operations into a limited partnership, a transaction that the company says will raise $700 million—cash it will use to pay off enough debt to cut its borrowings by more than half. Texas International has agreed to sell $120 million of assets for cash it can use to pay down its debt. An executive at Quanex, an atomic, emphasized that, unlike most junk bonds, its bonds are secured by a lien on two of its steel plants. "At the first default," he says, "the bondholders get the plants."

Who owns the junk that's likely to show up on the next heap of defaults? High-yield mutual funds own about $26 billion in junk, according to Lipper Analytical Services. FORTUNE examined the portfolios of 35 of the 50 or so funds that invest mainly in junk bonds, using the most up-to-date quarterly reports available. Four were too old to consider. The remaining 31 dated from June to December of last year. If atomics and subatomics in a fund's portfolio represented the same proportion as they do of the entire junk universe—including bonds FORTUNE excluded from its sample—then each fund would have about 2.8% of its holdings allocated to these most vulnerable types. As a group, however, the funds appeared to have a slight predilection for the risky stuff. Twenty-four of the 31 funds had more than 2.8% of the total value of their bond holdings invested in atomics or subatomics. The percentage of risky junk varied considerably from fund to fund: In June, Bull and Bear High Yield Fund owned atomics and subatomics with a face value of $20 million, representing about 18% of its $111 million invested in bonds. At the other extreme, Vanguard's High Yield Bond Portfolio, with total bond holdings of $954 million last July, owned atomics and subatomics amounting to only 1.9% of its portfolio.

Besides junk bond mutual funds, few buyers of junk disclose much about what they own. Pension funds, which own an estimated $15 billion in junk, must report their holdings only once a year, and only to the Internal Revenue Service, which doesn't make the information public. Insurance companies ($40 billion) open the kimonos on their portfolios only once a year, in publicly available statements they file with state insurance commissioners. While most statements currently available are too old to matter, FORTUNE checked the December 1985 portfolios of Executive Life of New York and Presidential Life, both well known for investing in junk. They seem to be particularly savvy junk collectors: Both had minuscule holdings of atomics and subatomics. "I don't like the small deals," sniffed an investment officer at one of the companies as he was read the names on FORTUNE's lists.

While a few institutional investors may have portfolios overloaded with the junkiest junk, it seems likely that the riskiest stuff is fairly evenly distributed. If the rest of a money manager's junk bonds perform as well as they have in the recent past, a default rate as high as 6% would knock down the total return on his portfolio by approximately 3.65 percentage points, an estimate based on Professor Altman's studies of how much value bonds typically retain after defaulting. In other words, the return would be reduced to about what he could earn on government bonds.

But *will* the other 94% of junk bonds go on performing as well as always? A 6% default rate would probably shake investors' confidence in a far broader segment of the market. An exodus from junk to higher-quality investments—or from low-grade junk to high-grade junk—could send bond prices tumbling. Even investors perspicacious enough to have avoided the defaulted bonds could see the values of their portfolios shrink, at least until the market regained investors' faith.

A RECESSION could have far more drastic consequences. Most economists say that as long as the economy keeps chugging along they won't worry too much about the junk bond market. But they add that even a modest downturn later this year, a scenario that few economists are predicting, could jeopardize junk issuers in already weak industries such as steel, construction, and restaurants. "Massive failures of companies with junk bonds are a distinct possibility in a downturn," says Edward Yardeni, chief economist for Prudential-Bache Securities. A shakeout, he says, "could feed on itself. Because there are so many companies financed this way, there could be sort of a domino effect."

What seems more likely is the emergence of a two-tier market in junk bonds. Investors and rating agencies, more aware of the vastly different tiers of quality, probably will invent a new line to divide "investment grade" junk from the "speculative" stuff. Drexel's Post, for one, maintains that the amount of independent analysis performed by junk investors has increased "substantially" in the past year. Drexel's competitors, seeking to make a name in the business, are also committing more resources to credit analysis.

There's quality—of sorts—to be had. Over the past two years, as Morgan Stanley's Martin Fridson notes, an impressive number of large, highly liquid junk issues have come onto the market, issued by the likes of BCI (formerly Beatrice), Colt Industries, and Phillips Petroleum. Another encouraging sign: Some issuers are beginning to pay off their junk debt by selling stock. If the stock market stays strong, many companies will have an opportunity to convert some of their debt into equity.

The emergence of big issuers along with scores of midsize but equally solid companies stands to encourage more investors to participate in the junk market. In fact, 15 large insurance companies surveyed recently by Morgan Stanley suggested that they ultimately plan to invest an additional $20 billion in high-yield bonds. That will presumably mean still more credit analysts crunching the numbers.

As more investors join the chase for high yields, the market should grow more efficient. The interest-rate advantage that quality junk bonds have offered compared with high-grade corporates should narrow. Indeed, while more junk bonds than ever before are likely to live up to their name over the next few years, far more are apt to become known by a new, less pejorative label. Blue-chip junk, anyone?

BANKS, TOO, LIKE JUNKY COMPANIES

■ Where there are junk bonds, there are often junk bank loans. Bankers generally don't like to talk about how inextricably connected to the junk bond market they have become. But contrary to the popular perception that companies that issue junk bonds aren't solid enough to borrow from banks, many issuers have apparently had no trouble lining up ample supplies of bank debt. Of course, they also pay a higher rate of interest on their loans than the average corporate customer. In addition to their junk bond borrowings, the companies on our atomic and subatomic lists owe another $5 billion—much of it to banks. Houlihan Lokey estimates that all the junk bond issuers it evaluated in creating the lists together owe close to $200 billion in bank debt.

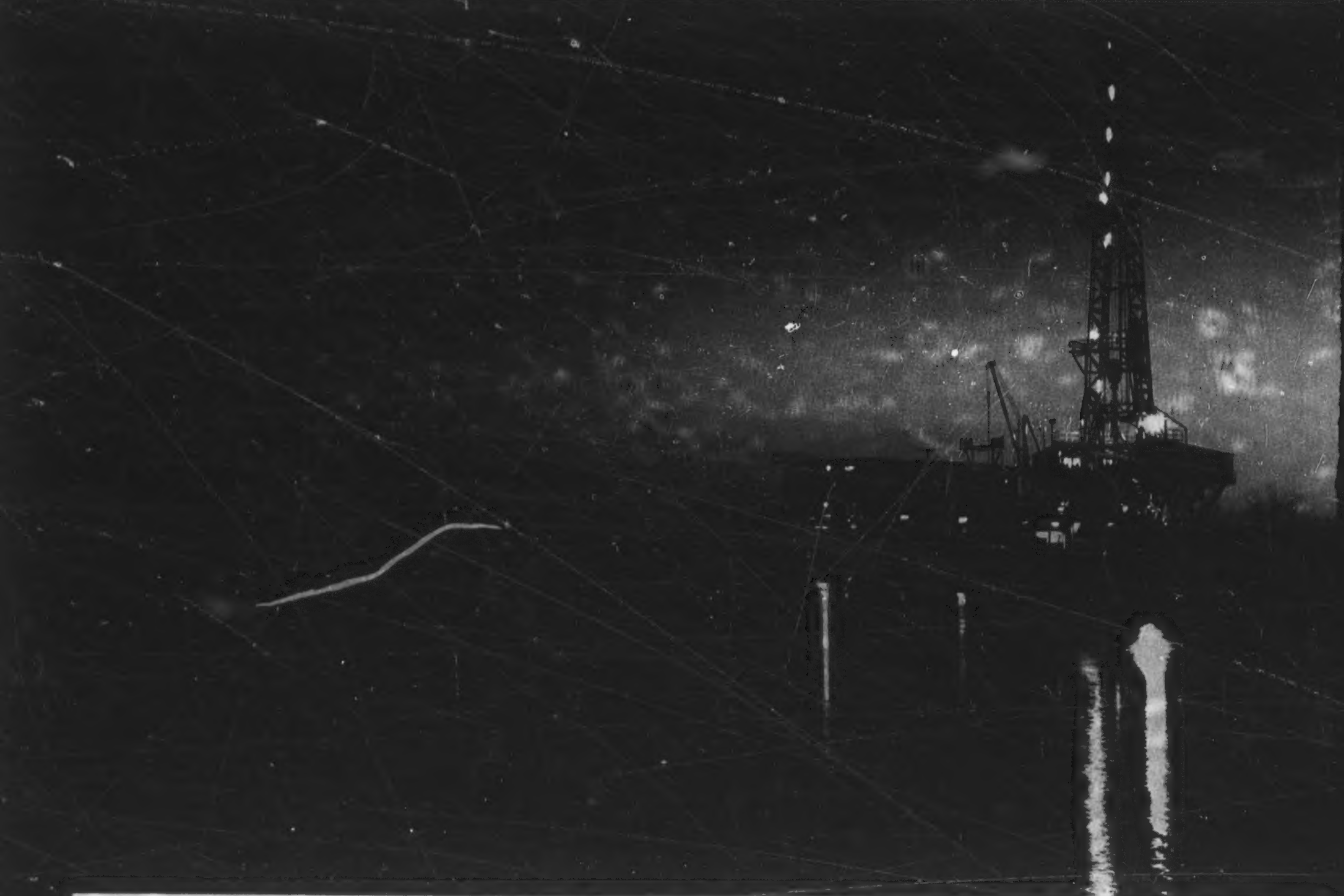
Bankers insist that *their* loans are "well protected," whatever other defaults may occur. While loans to junk issuers are not generally secured by specific collateral, banks almost always have first claim on a company's assets in the event it goes bankrupt and has to liquidate. The bankers also fill their loan agreements with myriad covenants that give them the right to step in if a borrower starts getting sickly. "I've done deals where I knew my loan could be repaid no matter what kind of trouble the company eventually got into," says a top executive at a major New York bank. As for the bondholders, he adds, "I wasn't so sure they'd see their money back in a bankruptcy situation." For taking that extra risk, of course, junk bond investors earn a higher rate of interest than the banks do on their loans.

There is little indication that banks will want out of the market any time soon. First Chicago, Drexel's lead bank, did catch the junk bond jitters shortly after the Boesky affair broke, telling Drexel that it would no longer accept junk securities as collateral for short-term loans to the same extent it once had. But most banks continue to look at high-risk companies with the same hungry eyes as investors who buy their bonds.

LOOKING AHEAD

GET READY FOR THE COMING OIL CRISIS

The price of crude is settling down—for a while anyway. But in a few years the U.S. is likely to be back in thrall to OPEC, fretting nervously about the next embargo. More drilling now, conservation, and—believe it or not—higher prices would help. ■ *by John Paul Newport Jr.*



In a wildlife refuge *on Louisiana's gulf coast, a drilling rig probes for oil and gas. Wilderness areas hold the most promising U.S. petroleum deposits.*

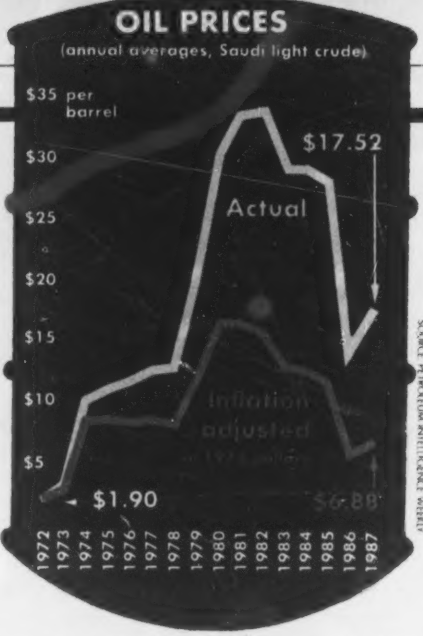
PHOTOGRAPH BY JAN STALLER

A YEAR OF Texas-size swings in the price of crude has turned the oil patch into the trenches. Like the survivors of Verdun after the shelling stopped, the U.S. petroleum industry is spooked. True, the Organization of Petroleum Exporting Countries has apparently agreed to hold the price of oil at $18 a barrel, but the cartel has tried to agree on prices before and the troops are suspicious. Says E. H. Clark Jr., chief executive of Baker International, the giant oil field services company in California: "We're all afraid to stick our necks out of the trenches to see if the war is really over. But there's optimism. Maybe we have seen the worst."

Maybe they have. A surprising consensus has developed among petroleum experts worldwide that the benchmark Saudi light crude will sell in a range of $18 to $20 a barrel (measured in 1987 dollars) for several years to come. Prices will bob, more likely down than up, owing to the vagaries of commodities markets and the notoriously wavering discipline of the cartel members. In late February, for example, prices were slipping toward $17. But barring the outbreak of a major new Middle East war or revolution, there should be no repetition of gut-wrenching gyrations such as those of last year when oil that sold for $27 a barrel in January was fetching $10 by summer and then shooting up to $18 at year-end. Prices should be steadier than that until the early 1990s, when they will rise as world demand for crude approaches the capacity of the producing nations to supply it.

The perception that underlies this ideal view is that a mature OPEC has finally mastered the principles of basic economics. Recent years taught the cartel that insisting on top dollar for its product cost it business and hastened a market collapse. High prices really did curtail demand: The Carter Administration in 1978 foresaw petroleum use in the non-Communist world growing from 51 million barrels a day to 60 million by 1985. In fact, demand *shrank* to 46 million barrels a day in 1985.

Moreover, the high prices that OPEC maintained for oil made exploiting new fields in Alaska, Mexico, and the North Sea extremely profitable. Production in non-OPEC countries grew 28% from 1979 to 1985, topping out at 25.6 million barrels a day, a quantity nearly equal to OPEC's entire capacity. Most petroleum economists and industry executives believe that Saudi Arabia is resolved for the time being to keep oil below $20 or $22 a barrel by flooding the market if prices begin to rise. It did just that in 1986 with disastrous consequences for OPEC.


OIL PRICES

(annual averages, Saudi light crude)

SOURCE: PETROLEUM INTELLIGENCE WEEKLY

REPORTER ASSOCIATE *Barbara Hetzer*

Yet another lesson learned the hard way was that if cartel members sell their oil without restraint, as Nigeria, Algeria, and others are wont to do, prices crater exactly as the economics textbooks predict. Cartel discipline may well lapse again, causing prices to plunge briefly to as low as $10 a barrel, but the recidivists are likely to reform faster in the future than they did last year. Says William M. Brown, director of energy studies at the Hudson Institute in Indianapolis and a prescient oil observer: "The experience of 1986 was a real shocker to every OPEC country, bar none. They saw that $8 oil, $7 oil, even $6 oil is possible." In January, Ecuador, an OPEC member that derives 70% of its export earnings from oil, failed to pay the interest due on its $8.1 billion of foreign debt. One of the few less developed countries that have made a point of paying their bills on time, Ecuador has been mired in economic problems resulting from the oil price collapse in the first half of 1986.

At $18, oil is high enough to sustain a profitable U.S. petroleum industry—but barely. The picture of oil that emerges in the years ahead is of an industry reduced in size, roustabout lean and rattlesnake mean, and cautious about committing huge sums for exploration and drilling. Gone will be the Rocky Mountain mobile-home boomtowns, the gaudy Texas gaucherie of Rolls-Royces converted to pickup trucks, and the fly-by-night operators drawn to oil fields by the gold rush prices of the early 1980s. The challenge for most companies will be simply to hang on for better times.

Those better times will be long in coming, however, unless the nation seriously addresses energy policy. The problem with low prices is that they encourage consumption while they discourage domestic production by rendering it uneconomic. Thus, the U.S. ultimately becomes dependent on foreign countries for its oil. The government's task should be to stimulate domestic production, encourage conservation, and spur the development of alternative sources of energy.

The real beneficiary of today's cheap oil is the U.S. economy. Although $18 a barrel is an increase of 80% from oil's summertime low, consumers will continue to get a break on their gasoline and heating bills; manufacturing costs will stay low, helping put a lid on unemployment; and the gross national product will get a healthy fillip. However, the warm narcotic of cut-rate crude is blinding the nation to the serious problem of steadily rising foreign imports.

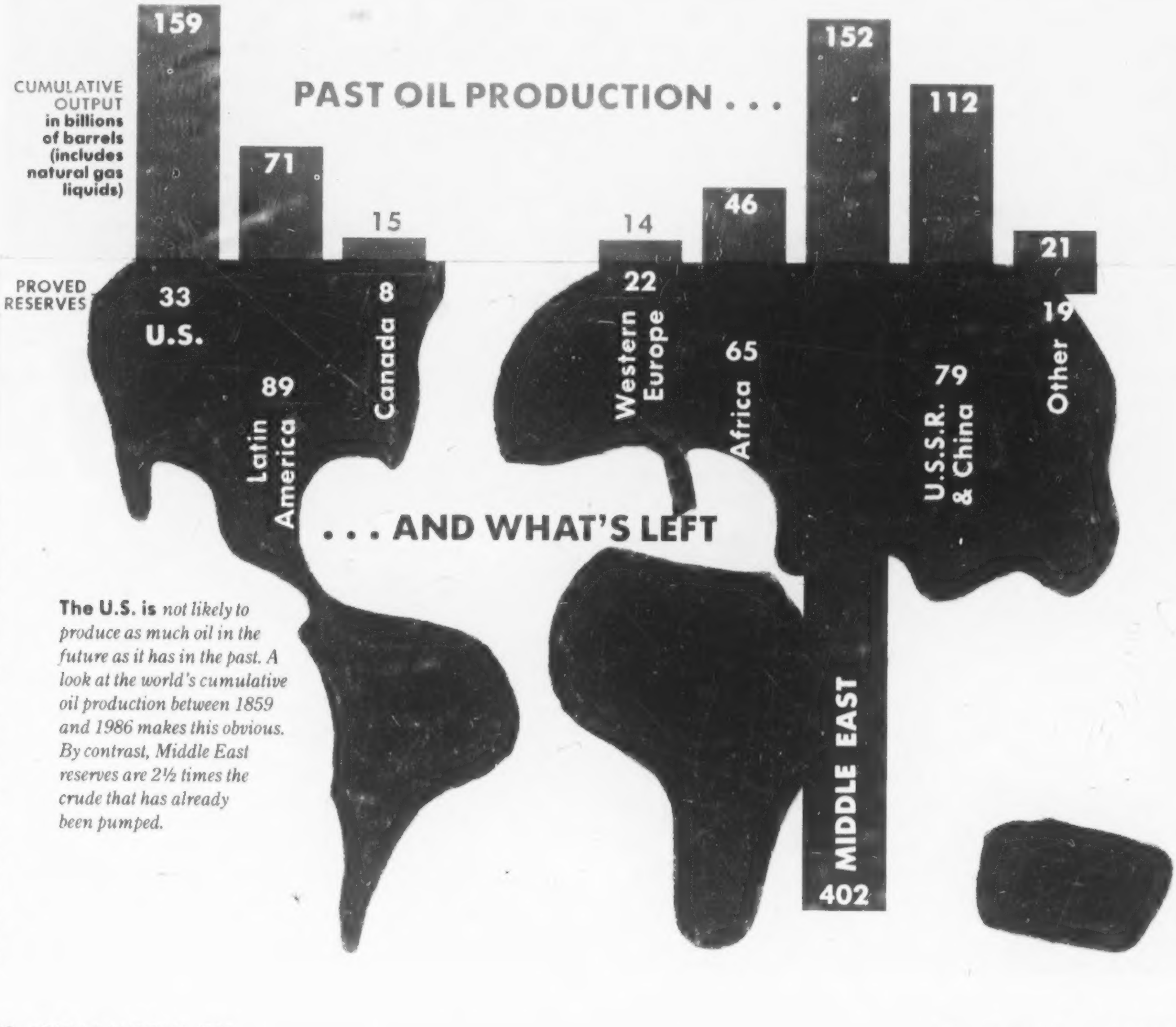
Already the trends are apparent. From January 1986 to January 1987, U.S. crude production declined by 680,000 barrels a day, a huge 7.5% drop. Meanwhile, U.S. consumption increased by 400,000 barrels a day, growing at a faster rate than the gross national product for the first time in nine years. As a result, imports spurted by more than a million barrels a day. The American Petroleum Institute estimates that if the price stays at $18 a barrel, imports will rise from 39% of total U.S. consumption last year to more than 50% in 1991. By comparison, at the time of the first Arab embargo in 1973, imports amounted to 35% of consumption; by 1979 they accounted for 46%. Although the U.S. tries to import most of its oil from such near neighbors as Canada, Mexico, and Venezuela, in a global market, shortages and price rises affect everyone equally. And of all the oil that countries export, fully 40% comes from just five Mideast producers. Warns Chevron Chief Executive George Keller, who is the chairman of the API: "Once again our country is confronted with the possibility of a major energy crisis."

IT IS DIFFICULT to predict the exogenous event that would touch off such a crisis. The Iranian revolution, which provoked the 1979 shock, caught everyone flat-footed, as did the Arab oil embargo of 1973, which followed the Yom Kippur war. An Iranian victory in the Iran-Iraq conflict, however, could presage yet another oil price jolt. Iran is a price hawk. Like several other OPEC members with limited petroleum reserves, it cares little about nurturing a long-term market and a lot about forcing up prices now. A victorious Iran, with its kamikaze army and highly exportable fundamentalist religion, could easily intimidate nearby Kuwait and Saudi Arabia into cutting production to push up the price or to humble the Satan residing in the White House. Economist Alan Greenspan and others believe Iran is already pressuring the Saudis to do just that. Says he: "OPEC is now Iran–Saudi Arabia."

Tight markets increase tensions. Right now, demand in the non-Communist world for oil is about 47 million barrels a day; that's about 12 million barrels a day less than world capacity to produce it. Two-thirds of that excess capacity resides in the Middle East. But in three to five years, economic growth in the West as well as in Third World countries will sop up that surplus. Then, even the slightest Middle East contretemps that closes some spigots could seriously disrupt the economy of any nation that is highly dependent on the region for its oil. That is what worries Chevron's Keller and other industry experts.

THE ACCORD that the squabbling OPEC nations reached last December in Geneva establishes an export quota of 15.8 million barrels per day for all 13 of them. Unfortunately, that level invites cheating by such revenue-hungry members as Iran and Iraq, but the ranks appear to be holding—sort of. In February, Saudi Arabia and four American oil companies that make up the Aramco consortium signed a five-month purchase agreement at $18 a barrel. By late March or early April, demand for oil traditionally slackens, so this spring will be the first of a series of tests of the $18 mark. Notes Herbert Krupp, an oil analyst at Bankers Trust: "To maintain $18 a barrel OPEC will need to reach many, many agreements over the next few years, successfully renegotiating their quotas time after time." John Lichtblau, head of the Petroleum Industry Research Foundation, believes that if prices sustain a serious fall, OPEC members would meet quickly to readjust their quotas.

The longer OPEC can hold the line, the easier doing so will become. That is why so many economists give $18 to $20 oil a chance of prevailing. The price is high



The U.S. is *not likely to produce as much oil in the future as it has in the past. A look at the world's cumulative oil production between 1859 and 1986 makes this obvious. By contrast, Middle East reserves are 2½ times the crude that has already been pumped.*

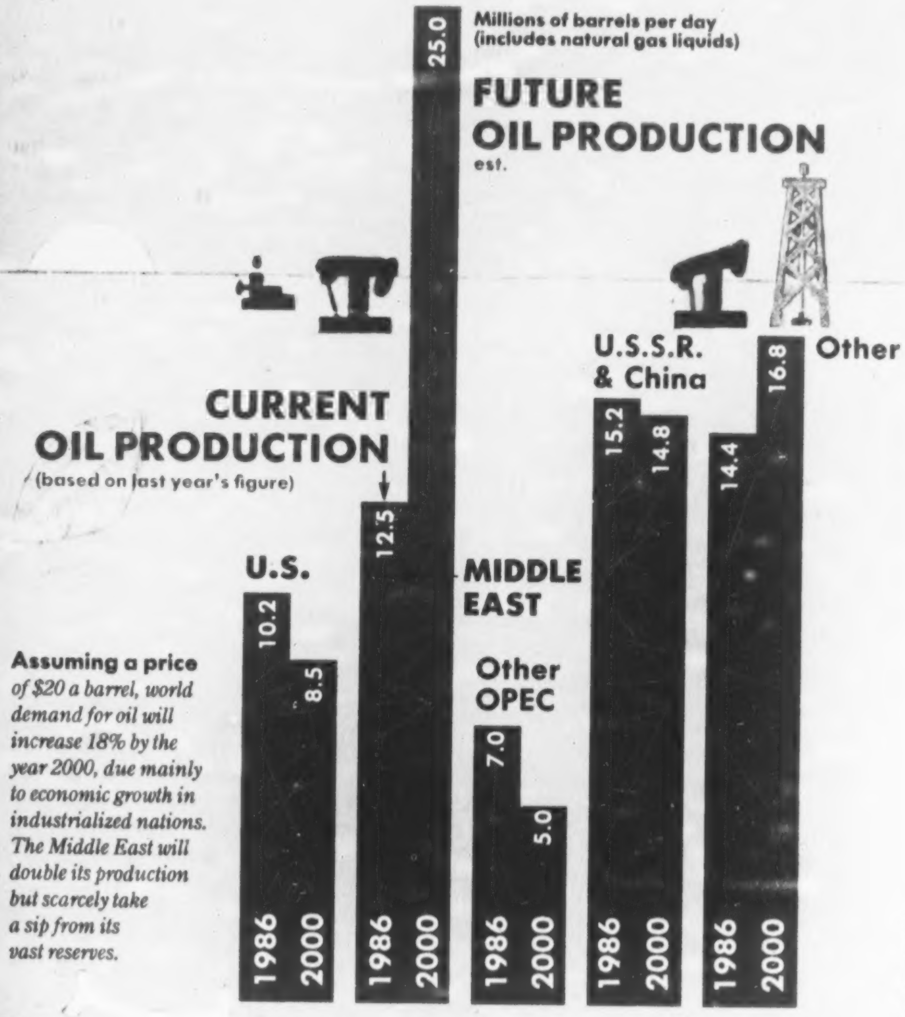
SOURCES: BP STATISTICAL REVIEW OF WORLD ENERGY AND PETROLEUM INDUSTRY RESEARCH FOUNDATION

ILLUSTRATIONS BY JOSHUA SCHREIER

enough to provide OPEC nations with enough revenue to satisfy their immediate needs, but low enough to discourage a great deal of new production from non-OPEC sources. At $18 a barrel, oil users will not be tempted to conserve more than they do now, nor would they switch to alternative fuels as they did in the early 1980s. Thus, demand for OPEC oil could grow at about 4% per year, and members' production quotas would gradually inflate.

By 1990, OPEC will be producing at 80% of its capacity, vs. 66% today, according to a new report by the National Petroleum Council, an advisory group to the Secretary of Energy. The report notes that historically, when OPEC has reached 80% of its capacity—as it did in 1973 and 1979—the cartel "has been able to increase world oil prices and maintain them." The primary reason: Most of the excess capacity is in Saudi Arabia, Kuwait, and United Arab Emirates, three countries that rarely disagree on policy. Though the hard-earned wisdom of the early 1980s might keep the "mini-cartel" from pigging out on prices, they would yield enormous power. "Eighty percent is the danger signal," says George Mitchell, chairman of Mitchell Energy, a large production company in Woodlands, Texas. "That's when that little mini-cartel will drive you to the wall."

To a small but significant degree, the U.S. is better able to weather an oil shock than it was in the 1970s. Conservation and the exploitation of coal and other fuels have reduced oil's share of U.S. energy consumption from 47% in 1979 to 43% today. Furthermore, the 500 million barrels of oil sloshing around in hollow salt domes in Louisiana and Texas as part of the Strategic Petroleum Reserve could substitute temporarily for imported oil. But the economic costs of crude shock would still be severe: the 1979 version produced two recessions. And mere vulnerability to a jolt would significantly hamper U.S. leverage abroad. The Reagan Administration might have been hesitant to launch last year's punitive air strikes against Libya, an OPEC member, if world energy markets had been tighter. Indeed, there were reports that the Arab oil producers considered but rejected a boycott.



Assuming a price *of $20 a barrel, world demand for oil will increase 18% by the year 2000, due mainly to economic growth in industrialized nations. The Middle East will double its production but scarcely take a sip from its vast reserves.*

SOURCE: CHASE ECONOMETRICS

Declining prices have already devastated the U.S. petroleum industry. Last summer the Hughes rig count, a measure of drilling activity, slipped below 700 for the first time since World War II but it has climbed back to 806. In 1980, when the spot price for the benchmark Saudi light crude was up in the ozone layer at $39.75, there were 3,220 drilling rigs boring into U.S. rock and seabed. Those legendary Texas wildcatters, made Midases overnight with lucky hits, are now drilling only one or two exploratory wells a year, and many have gone out of the business. Typical example: oilman Clayton Williams of Midland, Texas, who now gets more than half his diminished revenues from banking and telecommunications (see box, page 53).

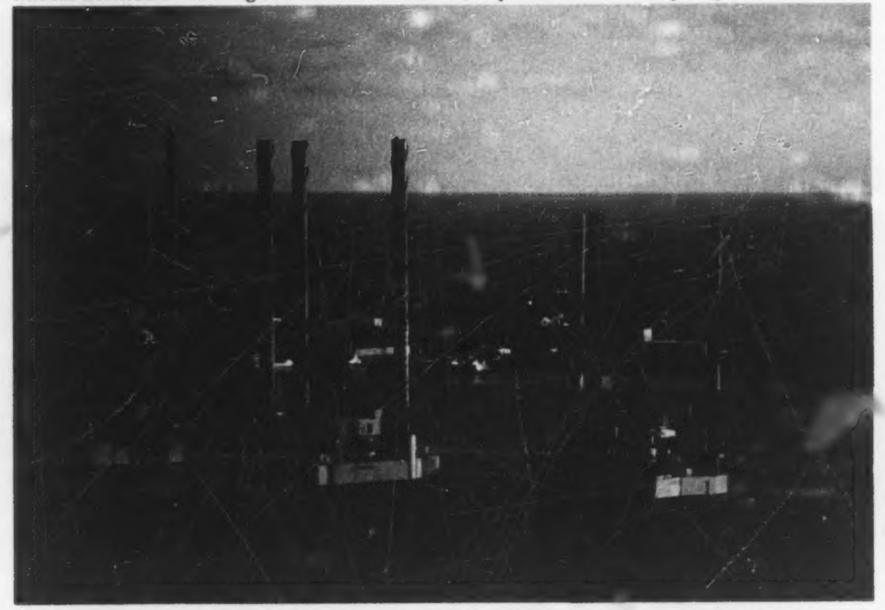
NEARLY 300,000 industry workers have been laid off since 1982, 80% of them in the oil field services industry, where four out of ten companies have dropped out of business. "I don't think you can afford to wipe out your staff," says Shell Oil Chief Executive John Bookout. "You may hire the bodies back, but it won't be the same well-oiled team that works together." Today geologists step lively as bellhops in Houston hotels, and unemployed drill hands have either drifted into other fields or resorted to poaching game to feed their families. The stream of professionals entering the business is drying up. Last year 192 students were enrolled in petroleum engineering at the University of Texas, down from 1,112 in 1982.

E. H. Clark, Baker International's C.E.O., has had to cut more than 10,000 workers from his payrolls. "It does tear your heart out to see what you're doing to families and lives," he says. "Probably the hardest part is the process of closing down and

LOOKING AHEAD

REAGAN BRADSHAW (2)

To plug a well *near Victoria, Texas, workers pump cement under high pressure from the truck into the wellhead at lower right. Once a well is shut in, its production is usually lost forever.*



Unused rigs *parked in the Sabine River channel near Port Arthur, Texas, may idle there for years waiting for the surge in oil prices that will spark drilling. Meanwhile, the owners pay carrying costs.*

selling off all the things you've built up and hired people for, and realizing that a whole way of life is going to be changed."

That change is likely to be permanent. For the sad fact is that U.S. oil production is in a sure decline. In the 80 years after 1859, when petroleum was introduced as an alternative to whale oil—thereby saving many a whale—the nation produced fully 64% of all the world's oil. Because drillers always tap the largest, cheapest, easiest-to-get-to deposits first, the ones that remain become progressively smaller and costlier to exploit. Thus, says Arco President Robert Wycoff, "even $30 a barrel was really not high enough to do anything more than barely keep production in the U.S. at a constant level. At today's prices, production will decline." Wycoff's view that this process is inevitable is widely shared. U.S. output started to decline in 1970 and continued through 1977 until Alaskan crude reversed the trend. But even that production will taper beginning in 1989, and estimates of the future slope of decline run in the range of 3% a year.

The U.S. is by far the most poked and prodded piece of landscape in the world. Geologists think nothing of plunging pipe several miles into the earth's crust looking for deposits a fraction the size of Spindletop and the great East Texas discoveries of the early decades of the century. As a result, the United States now needs 650,000 wells to pump its daily 9 million barrels of oil—not including natural gas liquids—because the average well pumps only 14 barrels a day. Five Mideast OPEC nations also produce about 9 million barrels a day, but those countries need only 3,000 wells to do the job because each pumps an average 3,100 barrels a day.

Middle East production costs are less than $1 a barrel, and the cost of finding new oil is negligible. It's a slight exaggeration to say that you could plunge a spoon into those huge deserts and the liquid would gurgle up. By contrast, U.S. production costs are roughly $7 a barrel, and finding costs, though hard to calculate with precision, are about $10, according to Arthur Andersen, the accounting firm. Says George Mitchell: "We're a high-cost country when it comes to exploration and development. The easy stuff is gone." Geology is destiny, and this is the primary reason why an industry that could make money with Saudi light selling at $1.90 a barrel in 1972, the inflation-adjusted equivalent of $4.84 a barrel today, now moans about $18.

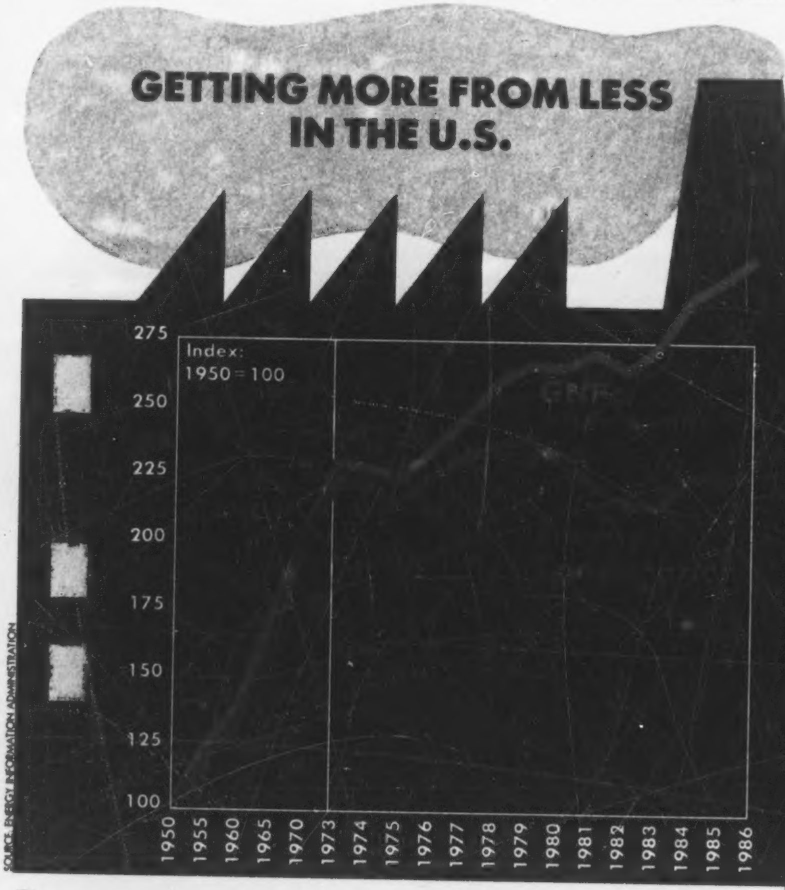
LOWER PRICES are forcing the industry to make some permanent cutbacks in drilling. For example, more than 90,000 of the nation's 450,000 stripper wells have been shut down since 1982. Stripper wells, owned by major oil companies as well as by tiny independent producers, pump fewer than ten barrels of oil a day and collectively supply 20% of domestic oil. But at $18 a barrel, many of these wells become uneconomic. Their income does not cover the costs of electricity to run the pumping unit, of reading the meters that monitor pressure, and of paying a royalty on the lease. Since oil and the toxic chemicals used in servicing wells can seep into and contaminate underground water supplies, most states require operators to cement up all unused stripper wells within a year. Even at higher prices, drilling through concrete to unplug the pipes, along with other start-up costs, would make reopening most of these wells prohibitively expensive. The loss to U.S. production in the 1990s from shutting them in could run to one million barrels a day.

Financing the exploration that must be done today to yield production in two to ten years is difficult. Major oil companies are almost totally dependent on internally generated cash flow to fund their search. Last year, when prices averaged $15 a barrel, industry cash flow declined 44%, cutting exploration budgets by a third, to $26 billion. In addition, the dwindling cash flows of such major producers as Chevron, Phillips, and Unocal must be siphoned off to service high debt loads resulting from expensive mergers or shoot-yourself-in-the-foot tactics to repel raiders like T. Boone Pickens.

As a proxy for exploration, many majors are buying existing proved reserves, which is cheaper by a few dollars per barrel than finding new ones. But all they are doing is swapping assets without adding new supplies to the nation's oil cupboard. William Strevig, publisher of the *Quarterly Reserve Report* that follows such transactions, tracked a 67% run-up since 1984. "This buying and selling of resources is done by people who want to stay in business and can't justify drilling new wells," he says.

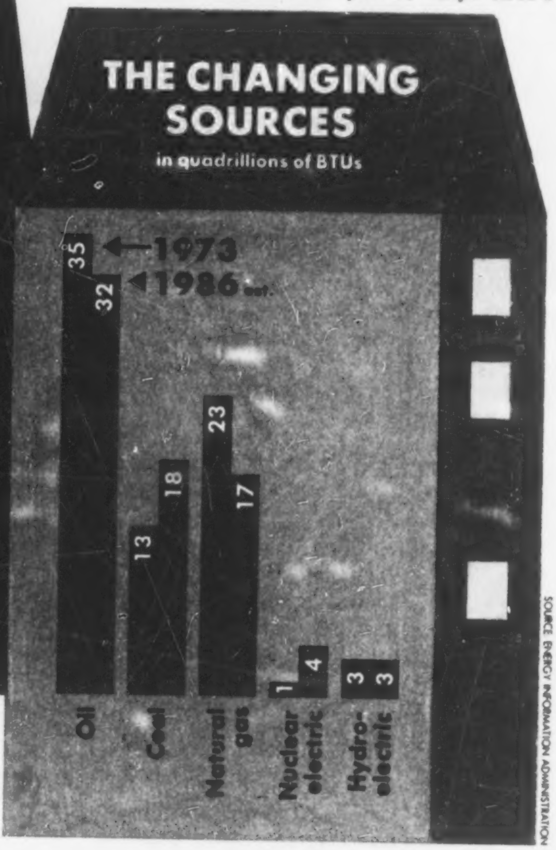
INDEPENDENT OIL COMPANIES, which drill about 85% of all new wells, and which must raise most of the cash they need for exploration from outside sources, have seen their traditional caches of capital dry up too. Banks, badly burned by energy loans in the past, are chary of making new ones. And the 1986 Tax Reform Act has made investing in drilling funds less attractive; investors cannot use the losses to offset ordinary income unless they have a working interest in the well, which exposes them to unlimited liability. Jeff Sandefer, at 26 a fourth-generation Texas oilman, observes that "if you take a business as risky as finding oil and gas and add price risk on top, you've given people an awfully good reason not to throw money into it."

Nonetheless, some companies continue to throw money into exploration and can find domestic oil profitably at $18 a barrel or even $15. Shell Oil, one of the most successful and best-managed U.S. oil companies, was able to replace 20% more oil and gas than it produced in 1986 at an average cost per barrel of less than $5; the company expects to do as well in 1987. Remarks C.E.O. John Bookout: "I'm not saying I'll like my return at $18 oil prices, but $18 will provide more than enough cash income to carry out the exploration program we have in mind." The company's conservative managers now premise all their exploration on selling the greasy stuff for an average of $15 a barrel. Arco, the largest domestic producer, is basing its exploration program on assumptions of $18 to $20 prices. "We can adapt ourselves to almost any price level, but it means lower profits," says Arco's



SOURCE: ENERGY INFORMATION ADMINISTRATION

The conservation ethic *really has taken hold in the U.S. Until 1973, GNP growth and energy consumption were entwined: whither one goest, the other went in the same percentage increase. Now GNP is still growing, but the amount of energy needed to sustain it has leveled off. Oil still provides most of the nation's juice, but natural gas is promising and coal is the ace in the hole. The U.S. has an estimated 350-year supply.*



SOURCE: ENERGY INFORMATION ADMINISTRATION

Robert Wycoff. Lower profits, however, meant that Arco had to scale back its program of oil and gas exploration and engage in a $3.4-billion stock buyback program to shrink its capitalization and buoy earnings per share.

The irony is that the times have seldom been so favorable for new exploration for operators who can raise the money. Drilling costs, depressed by the industry slump, are half what they were in 1981. With fewer bidders to compete for new leases and drive up the prices, attractive properties are available on better terms. Supercomputers help geologists pinpoint likely hydrocarbon deposits with greater accuracy, cutting the number of dry holes.

When prices were high earlier in the 1980s, oil companies pioneered other techniques to detect and extract oil and gas more efficiently. When prices fell, many of these procedures became too expensive, but they could be easily used again if and when it pays to do so. MIT economist M. A. Adelman has compiled historical evidence showing that increasing knowledge about the earth's crust and advances in extraction technology, which enable companies to recover a larger portion of each deposit, have almost continuously offset the increasing difficulty of finding oil. "We will *never* run out of oil," Adelman says. "The real problem is the cost of providing the flow of additional reserves." Michel Halbouty, a mustachioed Houston wildcatter who seems to have been born with a divining rod in his mouth, believes that technology will be the salvation of U.S. oil. "You put these new concepts together with the right incentives and higher prices, and I believe this country could be producing ten million barrels of oil a day within ten years," he gushes. However, Halbouty's views are far more optimistic than those of most of his colleagues in the industry.

PROPER EXPLOITATION of the nation's natural gas reserves could also postpone the effects of a diminishing oil supply. Natural gas takes the rap for being a scarce and declining resource. But discoveries made since the late 1970s suggest that gas resources may be many times those of oil. Although the exploration boom that followed decontrol of new finds created a gas "bubble" or surplus of some three trillion cubic feet—the nation uses 17 trillion a year—analysts expect demand will grow so long as the price of oil, to which natural gas prices are loosely tied, stays at $18 a barrel or more. Many of the nation's utilities would like to burn this clean fuel and are lobbying for the repeal of restrictive federal legislation (see box, page 56).

The Reagan Administration has a decidedly hands-off, free-market approach to energy policy. "There is nothing we can do as a government to stop domestic petroleum production from declining," says Energy Secretary John Herrington, leaning into his words. The industry is still paying for the days of "obscene" profits and for its decisions to reinvest those profits in ways that often offended Americans. The government should not be eager to finance further forays into retailing or office equipment. However, from a public policy perspective, the national interest suffers when the U.S. is heavily dependent on foreign oil. Among the proposals that politicians, economists, and industry executives advocate for a sensible U.S. energy policy:

The U.S. will *never* run out of oil. The real problem is the cost of getting to those additional reserves that by now have become so difficult to exploit.

▶ **DROP THE CALL FOR AN OIL IMPORT FEE.** Enacting such a tariff on foreign crude is the most widely discussed remedy for too much dependence on imported oil. The arguments for it can be persuasive. Putting a $5 fee—a commonly cited figure—on each barrel entering the country would create a higher price for domestic producers and discourage consumption. A Department of Energy study released in April 1986 calculates that a $5 fee would reduce imports by 600,000 barrels per day and result in an extra $3.7 billion for the U.S. Treasury over five years. "The oil import fee would preserve the domestic industry so that when the price goes up they'll be there to do some extensive exploration," says Senator J. Bennett Johnston (D-Louisiana), chairman of the Senate Energy committee. "If we rely on the invisible hand, we're likely to get the shaft."

But the costs of a fee are likely to outweigh the benefits. According to the DOE study, raising the nation's cost for petroleum energy by $5 a barrel would over a five-year period boost inflation by 1% annually and reduce the growth in GNP by as much as 0.7% a year, thereby putting thousands of people out of work. More important, a fee would hurt U.S. industries that compete abroad by making them pay more than they do now for an essential raw material. Furthermore, to pass Congress, such a fee would have to have exemptions. Says the top strategic planner at a major oil company: "You'd get a Canadian exemption, a Mexican exemption, a consumer exemption. The heating oil people in Massachusetts would get preferential treatment. You'd get bureaucracy and it's counterproductive."

A gasoline tax would be far easier to administer than an import fee, since the government already collects 9 cents on every gallon that is sold. A Congressional Budget Office study concludes that imposing an additional 12 cents a gallon tax would cut oil imports by 100,000 barrels a day, would be less inflationary than an import fee, and would give the Treasury a dandy windfall of $9 billion a year. But such a tax, while salutary, would do nothing to encourage domestic oil production.

▶ **OPEN UP MORE FEDERAL LANDS FOR OIL AND GAS EXPLORATION.** The two most promising U.S. regions yet to be explored are the waters off the California coast, where the American Petroleum Institute estimates 3.2 billion barrels of oil could be profitably produced, and the Arctic National Wildlife Refuge, geologically next door to the 9.6 billion of proved reserves at Prudhoe Bay, which currently supply 20% of domestic U.S. oil. Unfortunately, no one can promise significant finds in either area, and environmentalists fear that oil drilling would despoil them. The annals of petroleum exploration are filled with supposed sure things like the Mukluk field in Alaska and the Baltimore Canyon off the Atlantic Coast that turned out to be billion-dollar dry holes.

Nevertheless, considering that production from offshore California and the Arctic alone might replace as much as one million barrels a day of imported oil, Congress should give industry a chance to see what it can find. The legitimate concerns of environmentalists can be protected with tough federal regulations. Says Chevron's George Keller: "Our industry's long experience in Arctic areas has demonstrated that oil exploration and development can be conducted with utmost care and protection for the natural environment." So as not to despoil the wilderness spanned by the Alaska pipeline, the builders insulated the pipe heavily to prevent the flowing crude's heat from escaping and melting the frozen tundra. The pipeline was either raised or buried as necessary to preserve caribou crossings.

continued

Congress should also improve the terms under which it auctions leases. As it stands now, in order to win a bid on an offshore lease, companies often must pay multimillion-dollar bonuses before they know whether a leased field would yield oil. A more sensible plan might be for the government to agree to accept smaller up-front payments in exchange for a greater share of royalties if a company strikes it rich.

▶ **BUILD UP THE STRATEGIC PETROLEUM RESERVE.** The half billion or so barrels of oil now stashed in salt domes exceeds the amount of oil held back from world markets by the Arab embargo of 1973, according to John Elting Treat, executive publisher of the *Petroleum Intelligence Weekly* newsletter. The SPR's very presence discourages the use of oil as a weapon against the United States. William Hogan, professor of political economy at Harvard, estimates that once the SPR reaches its target of 750 million barrels, its oil could substitute for half of all U.S. imports for about nine months and give a jittery world situation time to sort itself out.

The Administration has proposed cutting the fill rate for the SPR in half, to 35,000 barrels a day in 1988. Representative John Dingell (D-Michigan), chairman of the House Energy and Commerce committee, has been urging the White House to keep the reserve acquisition at 75,000 barrels a day and expand the pipeline system to distribute the oil. Dingell is also a strong advocate of better contingency planning for operating the reserve and allocating petroleum in the event of a future energy crisis. "The Administration has said its policy in the event of a shut-off is to let the market take care of it," says Dingell. "I've told them at the White House that when the shut-off happens and the market *doesn't* take care of it, any fellow who comes to town with a length of rope, a pot of hot tar, and some feathers will know where to find them."

▶ **REPEAL THE WINDFALL PROFITS TAX.** Since the last time oil companies had a few extra bucks they were apt to spend them acquiring the corporate equivalent of some very slow horses, the windfall profits tax looked like a good idea when it was passed in 1980. Oil was poised for flight into the $50 and $60 range, so the Congress mandated a tax that at worst could take 70% of the revenues producers earned in excess of $18.50 a barrel. Because prices now are below $18.50, the tax is not generating any revenues for the Treasury and so could be repealed without any loss. "It's a bad tax," says MIT economist Adelman. "Companies don't invest in development that would otherwise be profitable."

▶ **RESTORE THE DEPLETION ALLOWANCE.** This tax break permitted drillers to depreciate the value of the oil they pumped by 27.5% as they took it out of the ground. In 1975 Congress took the depletion allowance away from big integrated producers but let independent oil and gas concerns keep it, as well as other natural resource companies like copper miners and forest-product concerns. Says George Keller of Chevron: "Depreciation allowance is now a dirty word, and yet it makes eminently good sense. I don't know why your tax treatment should be different if you produce 100 barrels a day instead of producing 20,000. The economics are no different." Senator Phil Gramm (R-Texas), the balanced-budget advocate, argues that some, perhaps all, of the lost revenue caused by restoring the depletion allowance would be offset by additional taxes on the increased production it inspires. However, before the government starts handing out tax breaks to the industry, it should demand in return that any increased profits are reinvested in energy production.

▶ **ENCOURAGE CONSERVATION.** Lower oil prices seem to be dissipating the urgency of conservation. The President has vetoed a bill that set improved efficiency standards for household appliances, although Congress is preparing to override that veto. In 1986 the Administration decided to yield to the auto industry's pressure to roll back the manufacturers' fleet fuel-economy averages from 27.5 miles per gallon to 26 miles per gallon. Congress is debating repeal of the 55-mile-an-hour speed limit, and as a result some states are less determined to enforce it. Cutting down on gasoline consumption is especially important because some 40% of all petroleum is used by motorists, and the percentage is growing. Since there is presently no economic alternative to gas for cars, this is no time to abandon those fuel-sipping engines and a sedate speed limit.

The point of U.S. policy is to help the nation muddle through until expanded use of alternative sources of energy can make it energy sufficient—or nearly so—in the first few decades of the next century. But, "until we get to the long run, we're stuck in the short run, where all sorts of things can happen to send prices spiking up and down," says Adam Sieminski of Washington Analysis Corp., a research firm. It is also unfortunately true that the best thing for the country in the short run—low oil prices—is among the worst things for the country in the long run.

UTILITIES KICK THE CRUDE HABIT

NO FEASIBLE substitute for gasoline is anywhere in sight, but alternative fuels can compete in other ways, notably in the production of electricity. The nation's utilities are big energy guzzlers, accounting for 36% of the BTUs consumed in 1985, the most recent figure available. And they have become experts at calculating the relative costs of such oil surrogates as gas, coal, hydro, and nuclear fuels. Today, according to estimates from Data Resources Inc., the Lexington, Massachusetts, consulting firm, oil accounts for a scant 5% of all electric power generated in the U.S. by utilities; coal, 55% of U.S. power. Second to coal is nuclear at 17%, followed by hydro at 13% and gas at 10%. DRI reckons that nuclear's share of power generation will rise to 21% by 1990. Energy analysts point out that this growth will largely displace oil.

Nuclear plants that are finally up and running have such low operating costs that it pays to run them full time. In its first full year of functioning, Pacific Gas & Electric's controversial Diablo Canyon plant in California had one of the highest operating efficiency rates of any utility plant in the country. But regulators have not yet decided how much of the $5.8-billion tab for building it will be passed along to the ratepayers in their utility bills. And the prospect of putting billions into customer rate bases—along with public fears about plant safety—has led state and local politicians to oppose licensing either New Hampshire's Seabrook or Long Island's Shoreham nuclear facilities.

Given the beating they have taken on the capital costs of their nuclear plants, those utilities that foresee a need for additional capacity in the 1990s are looking for fuel sources that require only simple, manageable technology that can be added in small increments with short lead times. Clean, cheap imported hydro power could provide an alternative to building new capacity; Canada is awash with the stuff. But high-power transmission lines are already carrying close to their maximum loads in the U.S., and new lines would run into stiff po-

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· JOY MANUFACTURING · YORK INTERNATIONAL · AM INTERNATIONAL · SNAP-ON TOOLS · SEALED POWER · LORAL · SOUTHWEST FOREST INDUSTRIES · CONSOLIDATED PAPERS · DE
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SUGAR · STANADYNE · DIAMOND BATHURST · LONGVIEW FIBRE · TAMBRANDS · SCI SYSTEMS · SCIENTIFIC-ATLANTA · CARLISLE · MOORE MCCORMACK RESOURCES · SEAGATE TECHNOLO
WISCONSIN DAIRIES COOPERATIVE · ATCOR · CLEVITE INDUSTRIES · MILLIPORE · BARNES GROUP · ALBERTO CULVER · NOXELL · RUSSELL · ROBERTSHAW CONTROLS · TRINITY INDUSTRIES · STANDARD PRODUCTS · X
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APRIL 27, 1987

FORTUNE
500

Walter Wick photographed the model built by Nicholas Fasciano, listing all companies in their order—in the FORTUNE *500. See page 355.*

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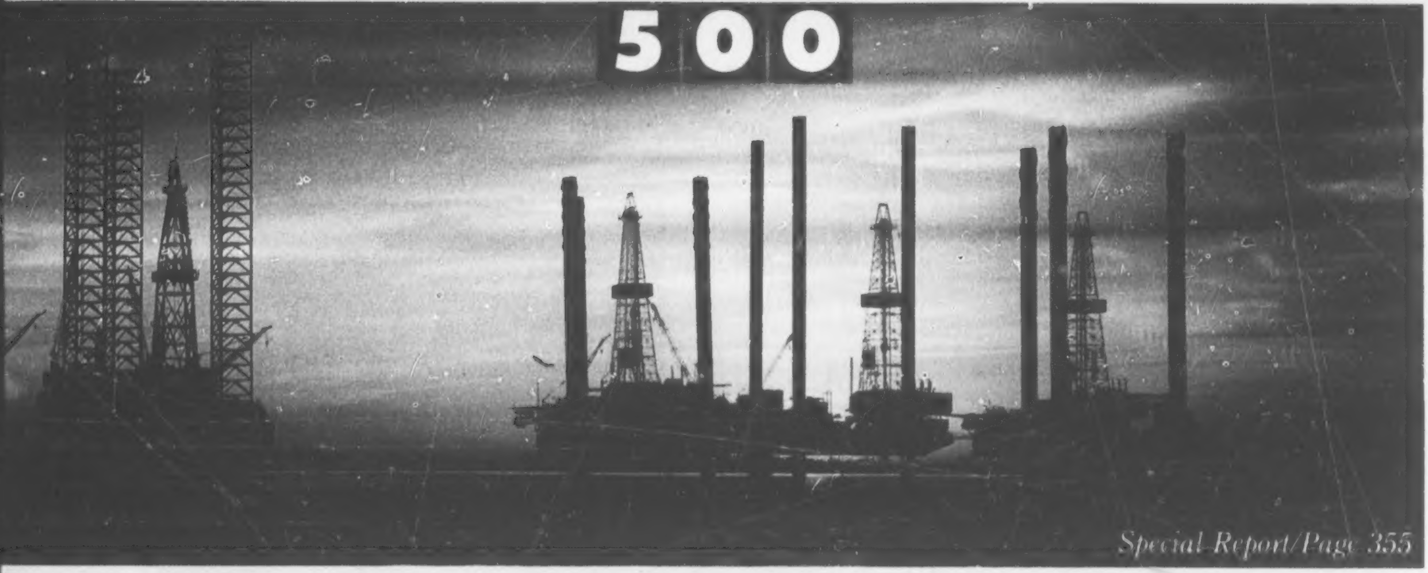

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NEWS/TRENDS

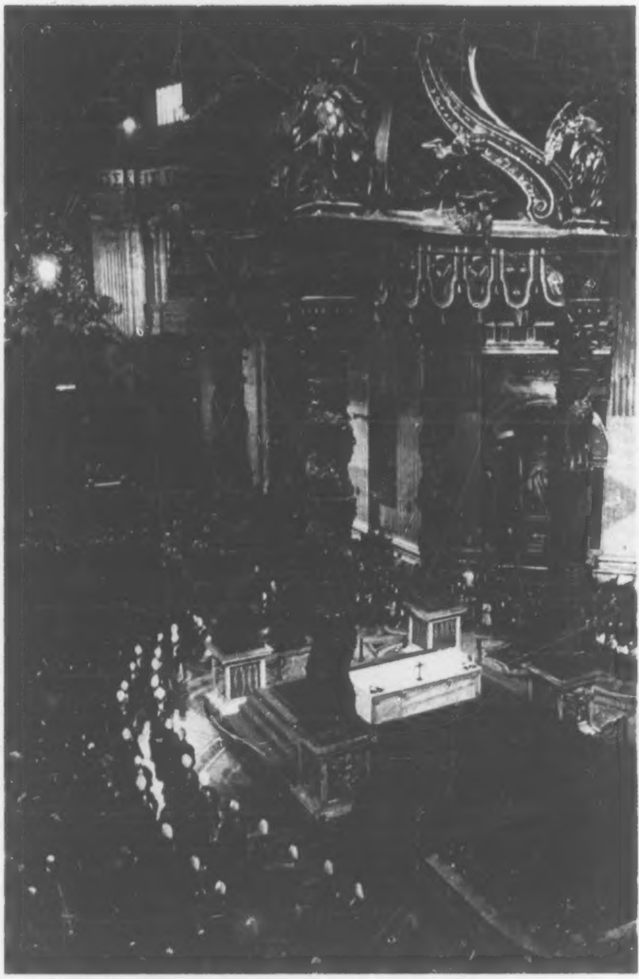
The shot heard round the world

■ A hardball trade sanction imposed by President Reagan in late March has convened cabinets and shaken stock markets around the globe. The new 100% duty on certain products containing Japanese semiconductors affects only about $300 million of goods, virtually unnoticeable among the $23 billion of electronic products the U.S. bought from Japan last year. But Reagan's aggressive move carried the risk of becoming the first strike in a trade war—at least one Japanese newspaper asserted that it was—causing executives and investors everywhere to seek cover.

Will the new American rallying cry become "Remember Silicon Valley"? How can war be averted? Who will suffer if it is not? Politics & Policy, page 175, provides some answers. For a surprising analysis of the state of U.S. competitiveness, see Competition, page 217.

Why the Vatican needs money

■ As Jim Bakker, Jimmy Swaggart, and other evangelical Protestants in the U.S. squabble over TV empires that pull in hundreds of millions of dollars each year, cries of poverty are coming from an astonishing source: the Vatican. While no one disputes that the Vatican's assets—especially real estate and art—are virtually priceless, they don't help pay day-to-day bills. The Holy See announced recently that it is $63 million in the hole for 1986 and desperately needs help from Catholics around the world.



VITTORIANO RASTELLI

Is this place broke? Pope John Paul II says the Vatican can't pay its bills.

FORTUNE estimates the Vatican's 1987 budget will be $120 million, which must cover salaries of more than 3,000 employees. The Vatican's direct sources of revenue are surprisingly modest. A major one is Peter's Pence, an annual collection taken in parishes around the world in late June. Last year it raised $32 million. Considerable revenue also comes from the Vatican's own investment portfolio, which may be as large as $300 million; conservatively invested, its income would still leave the Vatican far from covering its expenditures.

Pope John Paul II was so concerned with the Vatican's worsening budget problems that in 1979 he summoned all cardinals to Rome, the first time in 400 years they had all convened for anything other than election of a Pope. Following that meeting, a 15-member committee of cardinals started attacking the problem, seeking ways to pull in greater contributions and—join the party—urging the Pope to cut costs. In the next few months the Vatican will end centuries of secrecy and publish its first-ever public budget.

Money seems one of the few problems not facing U.S. evangelists at the moment. Their tribulations notwithstanding, FORTUNE finds that basing a business on the Bible often works extraordinarily well. See Managing, page 36.

STAFF: *Frederick H. Katayama, David Kirkpatrick, Michael Rogers, Patricia Sellers, and Daniel P. Wiener*

High-stakes cards

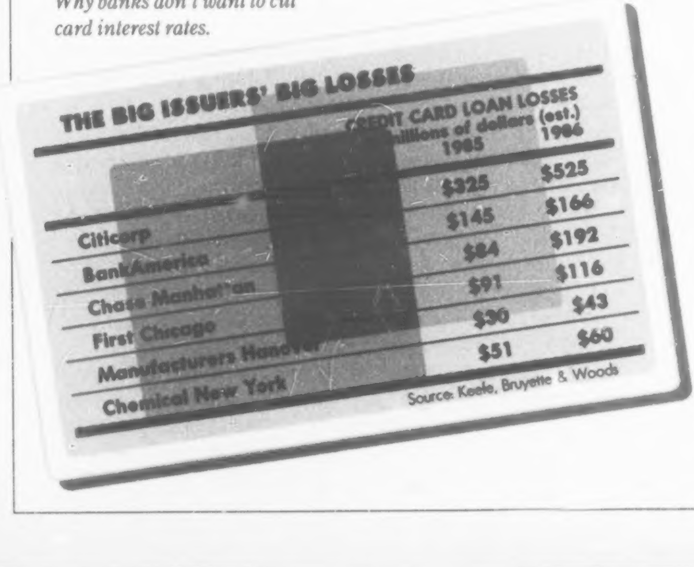
■ Despite what you hear, don't count on **American Express**'s new Optima credit card to incite a rate war with the banks. Optima, which will be issued in June, will charge interest around four points lower than most bank card rates. A look at some of the banks' annual reports shows why they won't try to match American Express's rates: Their credit card loan losses are higher than ever (see table).

Major banks still earn splendid profits on credit cards. George Salem, a banking analyst at Donaldson Lufkin & Jenrette, estimates that **Citicorp**'s card business accounted for 15% of the company's $1.1-billion net income last year. But that profit of some $165 million comes after loan losses of an estimated $525 million, or $1.4 million a day. At Citicorp and **Chase Manhattan**, bad-loan charge-offs reached about 5% of average credit card loans outstanding, vs. around 2% in 1982.

Bad loans are mushrooming because bankruptcies have risen and card issuers have been waging a battle to sign up customers. Losses typically are steeper on new accounts. By keeping card rates in the high teens while other interest rates have fallen, many banks have been able to offset the losses and make credit cards hugely profitable. They are extremely reluctant to tamper with that formula, fearing that rate cutting would reduce revenues from current cardholders without bringing in enough new business.

American Express has set an initial rate of only 13.5% on Optima. It plans to avoid big losses by issuing the card only to customers who have had American Express charge cards for at least a year and who have solid credit histories. It insists it has no plans to mass-market the card, but some bankers worry that Optima will give consumers reason to sign up for American Express cards instead of bank cards, primarily Visa and MasterCard. How will banks compete with Optima? Watch for small interest rate reductions on premium cards—those offering larger credit lines and requiring better credit histories—where loan losses are relatively small. Charles R. Walsh, **Manufacturers Hanover**'s executive vice president for retail banking, says he is considering giving breaks to premium card customers who charge a lot. Citicorp is testing a program in which cardholders who conduct other kinds of business with the bank get lower rates.

Why banks don't want to cut card interest rates.



THE BIG ISSUERS' BIG LOSSES

	CREDIT CARD LOAN LOSSES millions of dollars 1985	(est.) 1986
Citicorp	$325	$525
BankAmerica	$145	$166
Chase Manhattan	$84	$192
First Chicago	$91	$116
Manufacturers Hanover	$30	$43
Chemical New York	$51	$60

Source: Keefe, Bruyette & Woods

What Buffett isn't buying now

■ Where does Warren Buffett put his money when stock prices climb too high? A corporate jet, of all places. The Omaha billionaire has long derided many an aerial limousine as a waste of stockholder money. The news about Warren's wings came in the 1986 annual report of **Berkshire Hathaway**, the motley conglomerate he controls. The 16-page chairman's letter, which Buffett, 56, writes himself, is as folksy and self-effacing as ever. He eats crow for past remarks about companies squandering funds on corporate jets but notes he picked up his plane cheap—for $850,000, used. "Whether Berkshire will get its money's worth from the plane is an open question," he writes. "But I will work at achieving some business triumph that I can (no matter how dubiously) attribute to it."

As usual, Berkshire Hathaway had a terrific year in 1986, with net worth up 26.1% to $2.4 billion. In the 22 years since Buffett took over the company (he and wife Susan own about 45%), per-share book value has flown from $19.46 to $2,073.06, growing 23.3% compounded annually. The conglomerate has operations in insurance, candy, vacuum cleaners, and encyclopedias but makes most of its money off a few wizardly Buffett stock picks. In 22 months the market value of its 18% stake in **Capital Cities/ABC** soared 55% to more than $800 million, and its **Washington Post** stock shot up 31% last year.

No matter how high the Dow, Buffett plans to stick with his biggest holdings because he considers stocks way overpriced now. "I'd rather buy a good stock than a good jet," he said in an interview. "But there's nothing that we can see buying even if it went down 10%." When might stocks become attractive? "We haven't the faintest idea." Meantime, he's been doing some merger arbitrage (no Ivan Boesky, Buffett invests only in deals that are big, friendly, and announced). Last year he bought $700 million of medium-term tax-exempt bonds, the "least objectionable alternative" to everything else.

KENNETH JARECKE—CONTACT

Warren Buffett, one of the all-time great stock pickers, prefers bonds.

The great leap of computer graphics

■ Once the domain of computer nerds, the science of computer graphics is making technological leaps into real-world applications. New graphics products allow technicians in medicine, manufacturing, and defense to turn two-dimensional X-rays and photographs into remarkably clear three-dimensional images.

Leading the graphics industry's charge is **Pixar**, a company in San Rafael, California, started by computer scientists at movie mogul George Lucas's studio, **Lucasfilm Ltd.** Pixar's machine originally was used to produce high-tech animation for films like *Return of the Jedi* and *Star Trek II: The Wrath of Kahn*. Now the company's new chairman, **Apple Computer** founder Steve Jobs, is pushing it outside Hollywood.

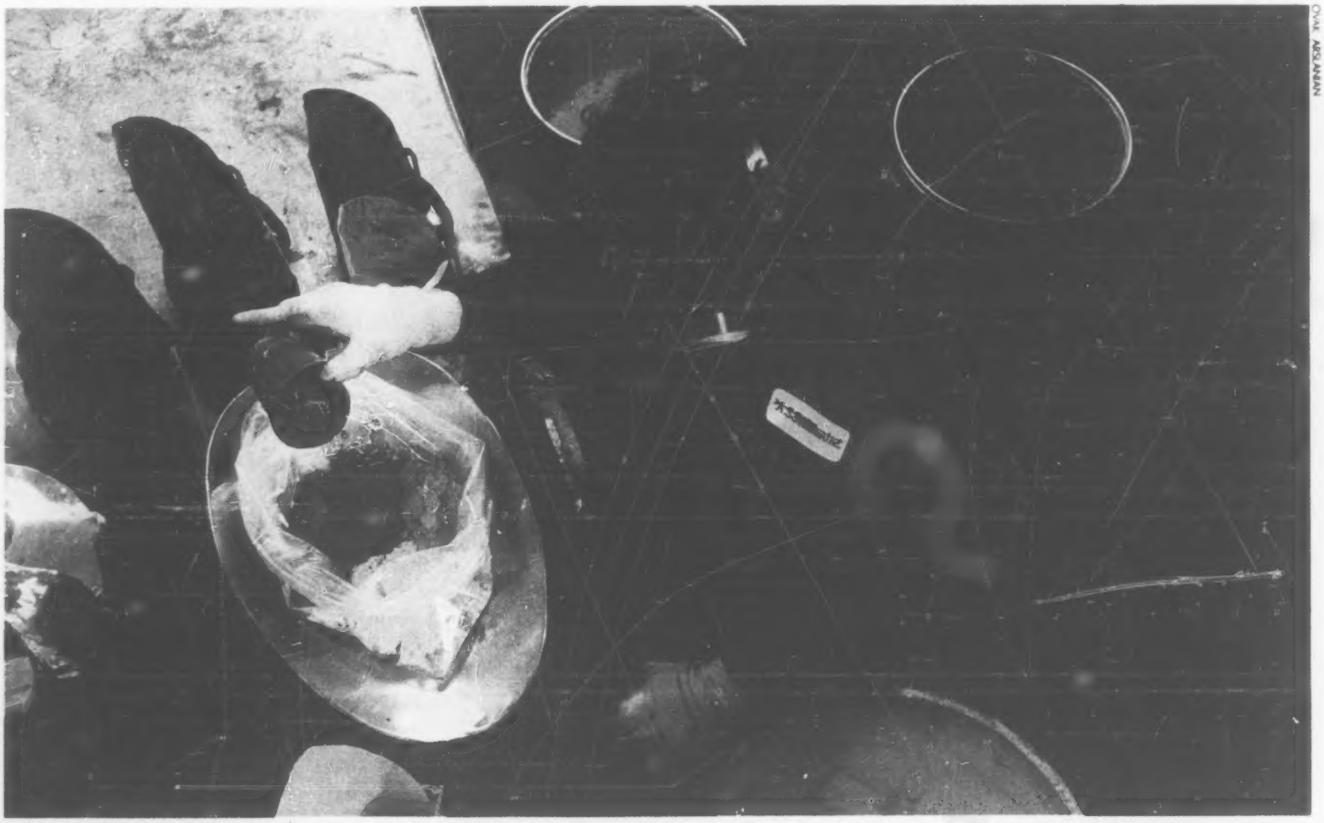
The heart of Pixar's offerings is a speedy $79,000 computer that renders sophisticated images on its screen. Pictures captured by X-ray machines, medical CAT-scanners, and weather and spy satellites are

LOOKING AHEAD

THE RICHES IN MARKET NICHES

The fastest-growing companies on the fringe of this year's FORTUNE 500 hold strong positions in specialized markets. Half are good bets to join next year's list.

■ *by Stuart Gannes*



OVAK ARSLANIAN

Pick a color, *and A. Schulman, a leading supplier of plastic compounds for myriad products, will mix up a batch at its Akron factory.*

GET ACQUAINTED with some likely newcomers to next year's FORTUNE 500. A more diverse selection of medium-size companies can scarcely be imagined. A few are brash youngsters less than a decade old. Others are graybeards, in business for more than a century. They make everything from condoms to concrete mixer trucks. Their factories are in the Rust Belt, the Farm Belt, and along the concrete beltways of the suburbs. But the fastest-growing members of this group share a common insight: It pays to exploit profitable and fast-growing corners of the market before competitors wake up to the possibilities.

While scores of big diversified corporations are in the restructuring shop, a surprising number of highly focused smaller companies are purring in the inside lane. Many cruise past sales and earnings mileposts with well-oiled regularity, and a few motor along at race-car speeds. Half of the firms listed on the next page are good bets to make their debut on the next 500 list. All 25 have recorded average sales gains of at least 5% for the past three years, and most have been growing at double-digit rates.

Successful medium-size companies have a knack for striking gold where larger competitors see merely dross. The performance of glassmaker AFG Industries of Irvine, California, is a glittering example. Although it made headlines recently with takeover bids for Lear Siegler and GenCorp, AFG is growing rapidly enough on its own to secure a 500

REPORTER ASSOCIATE *Barbara Hetzer*

berth. In the 1970s the company manufactured sheets of plain old window glass. Today more than 55% of sales come from specialty lines of tempered and colored glass. Says Chief Executive R. D. Hubbard, 51: "We picked niches where we could be the dominant supplier. We now make 70% of the glass for microwave oven doors, and 75% of the glass for shower enclosures and patio table tops." Instead of competing to sell commodity glass, AFG earns the best margins in the business, and it is less shattered by cyclical downturns in construction.

SOME FAST-GROWING companies outdo even AFG in their concentration on unique, high-performance products. A. Schulman bills itself as the largest independent plastics compounder. The Akron company buys resins from oil and chemical companies, then blends in colors and other additives to produce a dazzling variety of plastics. A. Schulman's customers, who make everything from skateboard wheels to lobster pots, willingly pay a premium for materials that meet their exact specifications. "If you need soft red plastic, we'll make you some soft red plastic," promises C.E.O. William C. Zekan, 68. Dozens of new products, including thermoplastics for car dashboards, polypropylenes for food packagers, and flame retardant compounds for electronics firms, boosted the company's sales 22% last year to $388 million.

Dominance in one area of manufacturing can be a stepping stone to lucrative new businesses. Textile maker Guilford Mills' mastery of the warp-knitting business—an efficient and low-cost method of producing fabric—was the key to its dramatic growth. Most manufacturers viewed warp knits, long used mainly to make lingerie, as a product with a limited market. But the recent success of North Carolina–based Guilford, which controls 60% of the warp knit business, had little to do with undergarment sales. In the 1970s, recalls 65-year-old President George Greenberg, "We took your basic lingerie fabric and used it to design the liners for car ceilings. Now we have 60% of that market. In home furnishings we are showing manufacturers how to use our fabrics on mattresses and box springs. And we're starting to develop industrial products like water treatment filters." New markets accounted for 33% of Guilford's sales of $416 million last year.

OSHKOSH TRUCK, in business since 1917, went into high gear in the mid-1980s when it began landing big orders to build heavy-duty military vehicles. Says President John P. Carroll, 47: "We always saw ourselves as a heavy-truck maker that zeroed in on niches. We are the world's largest producer of crash, fire, and rescue trucks for airports, and concrete mixer trucks that unload from the front end. In 1979 we decided to concentrate harder on winning defense business." Oshkosh's ability to design and manufacture all-terrain vehicles won the respect of Pentagon generals. And the company's efficient plants gave it a competitive edge at bidding time. It won Army, Air Force, and Marine contracts totaling more than $1.5 billion. Annual sales increases since 1982 have averaged 47%, and military orders accounted for 83% of last year's revenues of $399 million.

continued

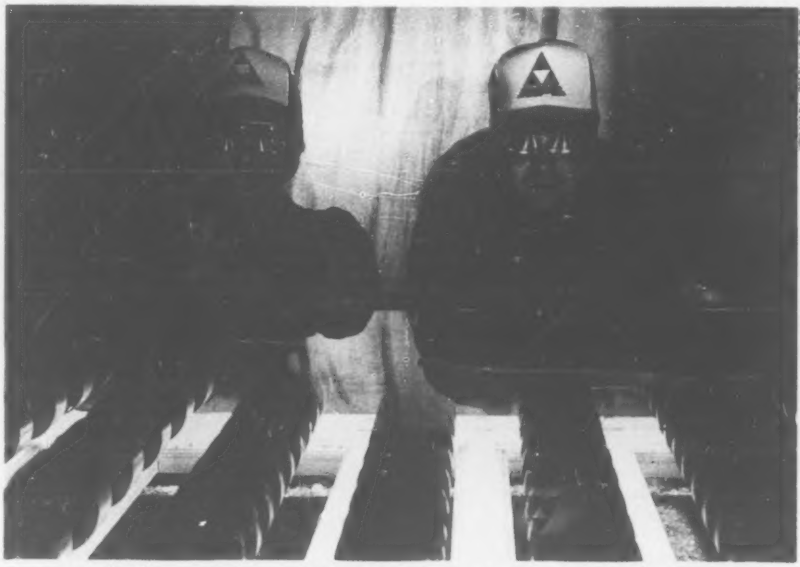
GROWING MIDSIZE COMPANIES HEADING TOWARD THE 500

COMPANY	PRINCIPAL PRODUCTS	1986 SALES	1986 NET INCOME	1983-86 AVERAGE ANNUAL SALES GROWTH RATE	
		$ THOUSANDS	$ THOUSANDS	PERCENT	RANK
GUILFORD MILLS (Greensboro, N.C.)	Textiles	416,265	19,026	17.8	10
AFFILIATED PUBLICATIONS (Boston)	Publishing (newspapers)	415,808	66,092	12.3	18
CHEMED (Cincinnati)	Soaps (industrial compounds)	412,769	37,633	15.0	15
TORO (Bloomington, Minn.)	Industrial equipment (mowers)	406,664	15,491	19.1	8
AFG INDUSTRIES (Irvine, Calif.)	Building materials (glass)	405,885	53,322	23.9	5
REYNOLDS & REYNOLDS (Dayton)	Printing (business forms)	404,011	23,856	17.0	13
NEWELL (Freeport, Ill.)	Metal products (housewares)	401,357	24,009	19.2	7
CARTER-WALLACE (New York City)	Pharmaceuticals	400,197	27,372	11.4	19
OSHKOSH TRUCK (Oshkosh, Wis.)	Motor vehicles	399,844	24,824	31.9	3
A.H. BELO (Dallas)	Publishing (newspapers)	397,233	20,268	17.9	9
KIMBALL INTERNATIONAL (Jasper, Ind.)	Furniture	394,092	26,056	15.2	14
APOLLO COMPUTER (Chelmsford, Mass.)	Computers	391,685	9,331	69.3	1
HELENE CURTIS INDUSTRIES (Chicago)	Cosmetics	391,010	11,040	17.1	12
COCA-COLA BOTTLING (Charlotte, N.C.)	Beverages	390,289	(12,980)	55.1	2
A. SCHULMAN (Akron)	Chemicals (plastics)	387,833	15,186	13.8	17
MORGAN PRODUCTS (Oshkosh, Wis.)	Forest products (doors)	383,735	10,076	28.5	4
PILGRIM'S PRIDE (Pittsburg, Tex.)	Food	375,195	19,123	13.8	16
NCH (Irving, Tex.)	Soaps (industrial compounds)	374,563	17,103	5.0	25
BANDAG (Muscatine, Iowa)	Rubber products	370,396	48,464	6.9	23
LANCE (Charlotte, N.C.)	Food	366,912	35,605	6.0	24
GOULDS PUMPS (Seneca Falls, N.Y.)	Industrial equipment (pumps)	356,226	16,815	9.0	21
KENNAMETAL (Latrobe, Pa.)	Industrial equipment (components)	355,377	571	9.5	20
THOMAS & BETTS (Raritan, N.J.)	Electronics	347,400	38,000	7.7	22
LA-Z-BOY CHAIR (Monroe, Mich.)	Furniture	341,656	23,010	20.2	6
SPS TECHNOLOGIES (Newtown, Pa.)	Metal products	341,400	14,300	17.2	11

Apollo Computer's growth was even steeper. The pioneer maker of computer work stations was a venture capital start-up in 1980. Hard-charging Thomas A. Vanderslice, 55, came aboard as C.E.O. in 1984, after failing to get the top spot at General Electric and GTE. Apollo's work stations were conceived mainly for automotive and aerospace engineers. But the appeal of work stations has widened, and they have become the fastest-growing computer product around. Industrywide sales are expected to surpass $4.5 billion a year by 1990. IBM and Digital Equipment are getting in on the action. But the big boys will have trouble catching Apollo, or the smaller and even faster-growing Sun Microsystems; the two companies control 40% of the market. Boasts Vanderslice, who before long may realize his ambition to run a FORTUNE 500 enterprise: "We penetrated Digital's customer base the same way they penetrated IBM's. We drove a wedge into an area where they did not focus their resources."

Most medium-size companies try to avoid locking horns with industry heavyweights. Yet few are as patient as Reynolds & Reynolds, about to become the oldest new member of the 500. Founded in 1866, the Dayton, Ohio, printer controls 65% of a lucrative but mature specialty business: supplying standard forms to car dealers. For decades the company was debt free, but saw no place else to go. The competition in bigger businesses, such as bill-of-lading forms, was just too strong. "Other companies can do those things for less than it would cost us to buy the paper," says C.E.O. Terry D. Carder, 52. Opportunity finally knocked last year, when Carder learned that Arnold Corp., a private printer with its own collection of specialty products, was up for sale. Says Carder, who paid $110 million for Arnold: "They fit our mold. We understand the things they do." Analysts predict the acquisition will boost Reynolds & Reynolds's sales to $540 million next year, which would have been enough to make this year's list.

A major acquisition will also help Carter-Wallace push to the FORTUNE 500's ranks. In 1985 the pharmaceutical and toiletry company used profits from drugs and old standbys like Arrid deodorant and Rise shaving cream to purchase Youngs Drug Products, the manufacturer of Trojan condoms. Trojan commands 55% of the U.S. condom market, which is suddenly a high-growth business. Sales are zooming mainly because of the protection condoms provide against AIDS and other sexually transmitted diseases. Youngs's sales contributed nearly $20 million to its new owner's revenues last year.



GORDON TRAIL—WATAGA

Tempered glass *rolls along an AFG Industries line in Greenland, Tennessee.*

Purveying a ragtag collection of niche products is Illinois-based Newell's forte. The hardware and housewares maker, which sells everything from paintbrushes to window shades, is in the midst of a three-year acquisition binge. Its latest and biggest deal: the pending purchase of Anchor Hocking, an old-name kitchenware manufacturer, for $338 million. Despite doubts on Wall Street, Newell is convinced the deal will pay off. "People have trouble understanding what we do," says C.E.O. Daniel C. Ferguson, 59. "But we've been following the same course for 20 years. We're building a multiproduct offering for big purchasers in the retail area." Ferguson thinks companies like K mart and Wal-Mart want a new type of supplier: the consolidated housewares producer. "Staple lines, not high fashion, are our bread and butter," he adds. "And we don't want a product line that anybody can be in tomorrow, so we look for businesses with high entry costs."

Taking good care of core businesses should never be far from the mind of any executive. The bosses of these FORTUNE 500 contenders roam shop floors with proprietors' eyes, and for good reason. Founding families—through majority or sizable minority positions—still control many of the companies, including A. Schulman, Oshkosh Truck, and Carter-Wallace. Top management holds sizable blocks of stock at most others. Like fond owners of sports cars, these executives tinker with the inner workings of their factories to make them run faster and smoother.

All invest heavily to upgrade manufacturing facilities. Guilford Mills spent $20 million last year on new technology for its plants. Already a low-cost producer of finished fabric, the company is producing more of its own synthetic fibers. AFG is expanding production capacity. Its new West Coast glass plant will boost revenues by more than $50 million.

Executives also hammer the importance of keeping customers happy. Hubbard of AFG takes pride in making speedy deliveries, even on small orders. His company will readily ship a case or two of glass instead of a full truckload. Says Hubbard, "When housing starts dropped 50%, we showed customers how to reduce inventories, and that helped us increase our market share. When business picked up, those people stayed with us." At Newell, Ferguson asks executives to attend major trade shows. "It lets customers know that this is our total business," he says. "I can't tell you what a plus that is."

Restructuring, the treatment for paunchy big corporations, is rarely necessary at these agile, fast-growing companies. Unwavering faith in the strategy that got them where they are is the norm. Most would agree with A. Schulman's Zekan, who says, "We're going to continue down the road we chose more than ten years ago. If anything, our commitment to that course will continue to grow." Attaining the FORTUNE 500 is a cherished dream for many. And virtually all would view being taken over as a bitter defeat. "We want to be around here in the year 2000," says Carder of 121-year-old Reynolds & Reynolds. "We believe in longevity." ■

FORTUNE

THE FORTUNE 500

THE LARGEST U.S. INDUSTRIAL CORPORATIONS

Text begins on page 359.

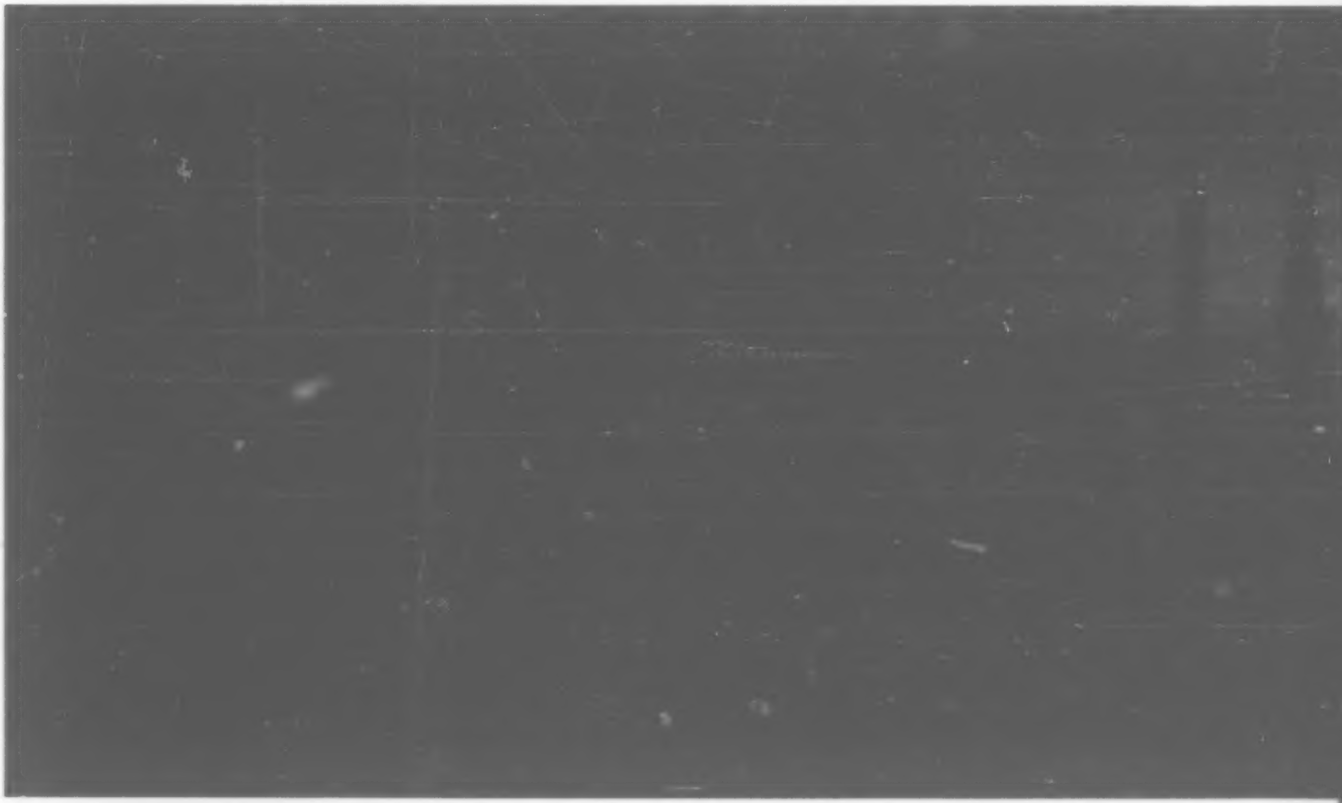
A YEAR OF PAIN AND PROMISE

THE FORTUNE 500 experienced both cataclysm and renewal in 1986. The effects of restructuring continued to ripple through the ranks of the industrials, which last year employed 600,000 fewer workers than they did in 1985. Some companies grew smaller and others disappeared from the directory, victims of mergers or leveraged buyouts. Glut plagued world markets for oil, devastating the financial performance of the giant oil companies. At the same time, new companies appeared on the list, some as the result of spectacular sales growth, others the product of spinoffs, another aspect of restructuring. And for certain 500 companies that began restructuring themselves in the early 1980s, last year finally brought big financial payoffs (see Managing).

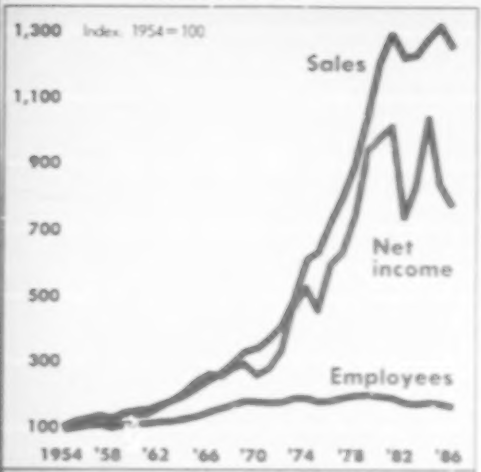
The upshot of all this *Sturm und Drang*: Fully one-third of the FORTUNE 500 companies reported lower sales in 1986 than in 1985. Indeed, in a year in which the rest of the economy was enjoying the fourth full year of a sustained recovery, the total revenues of the 500 actually declined, dropping 5% to $1.7 trillion from a record $1.8 trillion the year before. Almost as telling, the cutoff figure to make the 500 also declined: No. 500, Rochester & Pittsburgh Coal, had annual revenues of $420 million, some $4 million below the 500th company in 1985.

Acquisitions boosted the rankings of some omnivorous industrials even as two large companies, Beatrice and General Foods, disappeared from the top 50 and dozens more left the 500, many of them merged into other 500 companies. General Electric moved up to the No. 6 spot from No. 10 with the purchase of RCA. In the process the company became the butt of NBC late-night humorist David Letterman, who wondered if GE would "push for a miniseries about the development of the toaster oven." To be called *Burnt Offerings*, perhaps? For all the progress GE has made, it has not reclaimed the position it held as late as a decade ago, when it had occupied the No. 4 spot in the directory for 15 years running.

A total of 13 companies were swallowed up by other 500 corporations. Burroughs (1985 rank: 72) and Sperry (1985 rank: 63) merged last September to create Unisys, 46th on the new list. The consolidation of Miles Laboratories and Mobay gave birth to newcomer Bayer USA, No. 117. Twelve companies went private as a result of LBOs. Mergers also produced some anomalies: This year Occidental Petroleum became a food company. Oxy bought Iowa Beef Processors six years ago, and



PHOTOGRAPH BY ARTHUR MEYERSON



	1986	1985
Sales (billions)	$1,723.4	$1,807.1
Change in sales	−4.63%	2.75%
Profits (billions)	$65.0	$69.6
Change in profits	−6.7%	−19.1%
Assets (billions)	$1,560.8	$1,519.4
Number of sales increases	326	332
Number of profit increases	250	238
Number of money losers	70	70
Median return on sales	4.1%	3.9%
Median return on assets	5.2%	5.2%
Median return on equity	11.5%	11.6%
Median total return to investors	15.50%	26.31%
Number of employees (millions)	13.4	14.0

Through the Years . . .

In the past, the performance of the nation's 500 largest industrials has pretty much tracked that of the rest of the economy. Not so this year.

. . . and Recently

Restructuring and the oil glut made for a tough year. Sales were down for the first time since 1982, and profits fell as well. The total number of people employed by the 500 hit its lowest level in 19 years, and return to investors was only mediocre.

last year food became the company's biggest revenue producer. Oxy Pete is now Oxy Meat.

Spinoffs and breakups helped fill gaps left in the ranks by mergers and acquisitions. For example, Borg-Warner, No. 110, spun off York International, No. 389, and Dart & Kraft, which is once again just plain old Kraft, No. 37, spun off Premark International, No. 183, the maker of Tupperware.

For companies unable to climb onto the list by boosting revenues, there is always the less subtle but equally effective method of "buying" one's way on. That's what No. 317, Chicago Pacific, did. The former railroad began chugging down the acquisition track two years ago and has spent about $725 million for acquisitions. Company revenues cannonballed to $955 million from $90 million in 1985.

The real soft spot on the list—and in the economy—was oil. Total sales for all the oil companies on the 500 decreased 23.7%; profits were down 39.6%. One result of the precipitous petroleum decline has been the reappearance of diversity in the makeup of the top 20 companies on the list. In 1981, 12 of them were oil companies, including four of the top five; today only seven of the top 20 and two of the top five are mainly purveyors of petroleum. For the first time since 1972, International Business Machines supplanted Mobil in sales; No. 4 is Big Blue's highest rank ever on the 500.

Hard times in the oil patch made for good times in Motor City, as they often do. General Motors set a company sales record of $102.8 billion in 1986. That was enough to put GM at the head of the list again. It eclipsed No. 2 Exxon by $33 billion in revenues, a scant $1 billion less than what No. 7,

American Telephone & Telegraph, managed all year.

Not only were sales down for the 500 in 1986, but profits fell by 6.7%. Companies took write-offs on plant closings, layoffs, and divestitures in the hope of clearing the way for greater profitability in 1987. The loss of the investment tax credit hurt too. This year, IBM, long the 500's profit leader, slipped to second place when its earnings declined 27%. It traded rungs with Exxon, whose 10% earnings increase made it No. 1 in net income. Exxon's lower earnings from oil were more than offset by profits from chemicals and sales of some assets. Although the 79 money losers on the list (which begins on page 364) tied the record number established in 1985, they managed to lose more money. Giant LTV took the biggest bath, putting $3.25 billion in parentheses, the largest annual net loss ever suffered by an American corporation. Not surprisingly, the company is now in Chapter 11. And don't be overly cheered by that bulging sales figure at GM: Profits at the biggest of the Big Three were down more than 20%, to $2.9 billion, partly because of the cheap dealer financing it was offering to move the iron.

THERE WERE some bright spots for the 500 last year, particularly in pharmaceuticals and tobacco. Six of the top ten companies in return on sales were drug companies, putting the pharmaceutical industry first again in that category with a median return on sales of 11.1%, up from 1985's 10.4%. Pharmaceuticals—led by A.H. Robins, of all companies—also had the best showing in return on stockholders' equity—23.0%. Robins had wiped out its equity in 1985, and that 198.8% return last year came on a very low base.

Tobacco companies led all industries with a median sales increase of 18.9%. Those sweet brown leaves proved to be a pretty good investment, too. A wise—or lucky—gambler who put money in each of the 500's tobacco stocks on January 1, 1986, and sold them a year later realized a median 48.7% total return on his investment. Median total return for all industries, by comparison, was a mere 15.5%, down from 28.2% in 1985.

High tech continues to provide the fastest-growing newcomers to the 500. Seagate Technology, a Scotts Valley, California, maker of hard disk drives, bounded onto the list at No. 481 with a 114% increase in revenues. Xidex, a floppy disk manufacturer located in Sunnyvale, California, jumped into 480th place with a 67% increase in sales. Cray Research, the Minneapolis maker of supercomputers, joined the list at No. 425, having seen its revenues grow 52%. Cray also racked up a 20.9% return on sales, the highest in the directory. Another newcomer, Millipore, a Bedford, Massachusetts, company that makes filtration devices, appears on the list at No. 485 as a result of a 21% sales gain. That figure may not look as impressive as the increases for some other companies, but it was achieved despite the death in an April helicopter crash of three of the company's top executives. Cataclysm. And renewal.

—**Stephen J. Madden and Julianne Slovak**

Idle drilling rigs *wait forlornly on Texas's Sabine River, just north of the Gulf of Mexico. Falling crude prices devastated the oil industry, and its giants no longer dominate the ranks of the top 20 industrials.*

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**General Motors** (Detroit)	102,813,700	6.7	2,944,700	4	(26.4)	72,593,000	1	30,678,000	3
2	2	**Exxon** (New York)	69,888,000	(19.4)	5,360,000	1	10.1	69,484,000	2	32,012,000	2
3	4	**Ford Motor** (Dearborn, Mich.)	62,715,800	18.8	3,285,100	3	30.6	37,933,000	6	14,859,500	7
4	5	**International Business Machines** (Armonk, N.Y.)	51,250,000	2.4	4,789,000	2	(26.9)	57,814,000	3	34,374,000	1
5	3	**Mobil** (New York)	44,866,000*	(19.8)	1,407,000	8	35.3	39,412,000	4	15,239,000	5
6	10	**General Electric** (Fairfield, Conn.)	35,211,000	24.5	2,492,000	5	6.7	34,591,000	8	15,109,000	6
7	8	**American Tel. & Tel.** (New York)	34,087,000	(2.4)	139,000	115	(91.1)	38,883,000	5	13,550,000	10
8	6	**Texaco** (White Plains, N.Y.)	31,613,000	(31.7)	725,000	17	(41.2)	34,940,000	7	13,739,000	9
9	9	**E.I. du Pont de Nemours** (Wilmington, Del.)	27,148,000	(7.9)	1,538,000	6	37.6	26,733,000	10	13,374,000	11
10	7	**Chevron** (San Francisco)	24,351,000	(41.7)	715,000	18	(53.8)	34,583,000	9	15,493,000	4
11	13	**Chrysler** (Highland Park, Mich.)	22,513,500	5.9	1,403,600	9	(14.2)	14,463,200	20	5,344,800	20
12	27	**Philip Morris** (New York)[1]	20,681,000*	70.2	1,478,000	7	17.8	17,642,000	16	5,655,000	18
13	11	**Amoco** (Chicago)	18,281,000	(32.8)	747,000	15	(61.8)	23,706,000	12	11,324,000	12
14	23	**RJR Nabisco** (Winston-Salem, N.C.)[2]	16,998,000*	25.6	1,064,000	10	6.3	17,019,000	18	5,312,000	21
15	14	**Shell Oil** (Houston)[3]	16,833,000*	(17.1)	883,000	12	(46.5)	26,214,000	11	14,312,000	8
16	21	**Boeing** (Seattle)	16,341,000	19.8	665,000	22	17.5	11,068,000	29	4,826,000	25
17	16	**United Technologies** (Hartford)	15,669,157	(0.5)	72,727	187	(76.7)	11,091,787	28	3,803,063	32
18	22	**Procter & Gamble** (Cincinnati)[4,5]	15,439,000	13.9	709,000	19	11.7	13,055,000	21	5,954,000	16
19	19	**Occidental Petroleum** (Los Angeles)	15,344,100	5.6	181,100	96	(74.0)	17,466,777	17	4,308,300	30
20	12	**Atlantic Richfield** (Los Angeles)	14,585,302	(34.8)	615,116	25	—	21,603,543	14	5,258,730	23
21	18	**Tenneco** (Houston)	14,558,000	(5.5)	(39,000)‡	439	—	18,021,000	15	4,412,000	28
22	15	**USX** (Pittsburgh)[6]	14,000,000*	(24.0)	(1,833,000)‡	476	—	21,823,000	13	5,634,000	19
23	29	**McDonnell Douglas** (St. Louis)	12,660,600	10.3	277,500	61	(19.7)	7,910,700	38	2,844,800	46
24	30	**Rockwell International** (Pittsburgh)[7]	12,295,700	8.5	611,200	26	2.7	7,703,400	41	3,162,100	42
25	37	**Allied-Signal** (Morristown, N.J.)	11,794,000	29.4	605,000	27	—	11,268,000	27	3,686,000	35
26	33	**Eastman Kodak** (Rochester, N.Y.)	11,550,000	8.6	374,000	50	12.7	12,902,000	23	6,388,000	15
27	28	**Dow Chemical** (Midland, Mich.)	11,113,000	(3.7)	732,000	16	162.1	12,242,000	25	5,168,000	24
28	32	**Westinghouse Electric** (Pittsburgh)	10,731,000	0.3	670,800	21	10.8	8,481,800	34	3,009,600	44
29	35	**Goodyear Tire & Rubber** (Akron, Ohio)	10,327,700¶	4.4	124,100	128	(69.9)	8,609,500	33	3,002,600	45
30	36	**Lockheed** (Calabasas, Calif.)[8]	10,273,000	7.7	408,000	44	1.8	5,943,000	51	1,866,000	68
31	17	**Phillips Petroleum** (Bartlesville, Okla.)	9,786,000	(37.6)	228,000	72	(45.5)	12,399,000	24	1,724,000	73
32	40	**Xerox** (Stamford, Conn.)[9]	9,377,000	4.8	465,000	37	(2.2)	10,608,000	30	4,687,000	26
33	20	**Sun** (Radnor, Pa.)	9,376,000*	(31.9)	385,000	48	(26.9)	11,684,000	26	5,287,000	22
34	41	**PepsiCo** (Purchase, N.Y.)[10]	9,290,800	9.6	457,500	38	(15.9)	8,024,700	37	2,059,400	62
35	24	**Standard Oil** (Cleveland)	9,219,000*	(29.1)	(345,000)	472	—	15,955,000	19	7,020,000	14
36	42	**General Dynamics** (St. Louis)	9,211,400	9.5	(52,500)	443	—	4,552,500	71	1,264,400	107
37	34	**Kraft** (Glenview, Ill.)[11]	8,742,200	(12.1)	413,200	41	(11.4)	4,749,300	64	1,798,000	70
38	44	**Coca-Cola** (Atlanta)	8,668,556	6.5	934,347	11	29.4	8,373,438	35	3,514,979	37
39	47	**Minnesota Mining & Manufacturing** (St. Paul)	8,602,000	9.6	779,000	13	17.3	7,348,000	43	4,463,000	27
40	45	**Sara Lee** (Chicago)[5]	7,937,722	(2.2)	223,455	75	8.3	3,503,106	94	1,154,678	114
41	25	**ITT** (New York)	7,895,540¶	(37.9)	493,720	35	68.2	12,920,407	22	7,145,738	13
42	39	**Union Carbide** (Danbury, Conn.)	7,828,000¶	(13.1)	496,000‡	34	—	7,571,000	42	1,005,000	130
43	51	**Anheuser-Busch** (St. Louis)	7,677,200*	9.7	518,000	32	16.8	5,833,800	53	2,313,700	58
44	55	**Digital Equipment** (Maynard, Mass.)[5]	7,590,357	13.5	617,420	24	38.2	7,173,326	44	5,727,827	17
45	31	**Unocal** (Los Angeles)	7,482,000*	(30.3)	176,000	102	(45.9)	10,133,000	31	1,681,000	77
46	72	**Unisys** (Detroit)[12]	7,432,400	47.5	(43,400)	442	—	9,408,800	32	3,828,300	31
47	52	**Caterpillar** (Peoria, Ill.)[13]	7,321,000	8.2	76,000	178	(61.6)	6,288,000	48	3,149,000	43
48	60	**Raytheon** (Lexington, Mass.)	7,307,952	14.0	393,205	46	4.6	3,555,899	91	1,954,578	66
49	43	**LTV** (Dallas)	7,271,400	(11.3)	(3,251,600)	477	—	5,498,700	56	(2,558,900)	488
50	54	**Georgia-Pacific** (Atlanta)	7,223,000	7.6	296,000	59	58.3	5,114,000	60	2,452,000	54

The definitions and concepts underlying the figures in this directory are explained on page 410. √ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS

1-50

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
24,767,590	2.9	300	4.1	282	9.6	282	8.21	(33.14)	(2.03)	296	0.22	317	5.68	356	40
59,246,393	7.7	79	7.7	138	16.7	125	7.42	14.86	9.66	144	34.76	112	18.76	152	29
20,782,850	5.2	174	8.7	103	22.1	52	12.32	35.58	12.73	99	51.42	50	16.15	197	40
88,784,982	9.3	49	8.3	114	13.9	178	7.81	(26.80)	6.96	184	(20.41)	399	10.52	301	44
18,495,123	3.1	282	3.6	302	9.2	287	3.45	35.29	4.27	219	41.73	84	16.95	180	29
47,925,962	7.1	97	7.2	151	16.5	130	5.46	6.43	10.24	133	21.93	186	16.96	179	36
25,057,693	0.4	393	0.4	397	0.4§	396	0.05	(96.35)	(38.10)	345	5.18	292	3.94	365	36
8,388,752	2.3	325	2.1	351	5.3	348	3.01	(41.10)	(0.61)	283	31.20	128	11.28	288	29
25,800,000	5.7	150	5.8	216	11.5	243	6.35	37.74	7.43	174	28.41	140	12.76	256	28
18,003,486	2.9	294	2.1	353	4.6	355	2.09	(53.76)	(2.12)	299	25.56	166	14.88	218	29
8,215,443	6.2	128	9.7	73	26.3	30	9.47	0.96	7.30	177	22.49	183	13.12	250	40
20,217,891	7.2	94	8.4	112	26.1	31	6.20	18.43	18.69	32	68.56	20	21.21	110	21
19,593,089	4.1	239	3.2	322	6.6	333	2.91	(60.78)	(0.45)	281	11.23	257	14.17	227	29
14,616,808	6.3	125	6.3	188	18.1§	103	3.83	6.39	9.86	141	62.19	27	20.72	118	21
—	5.3	172	3.4	309	6.2	341	N.A.	—	—		—		—		29
8,105,092	4.1	241	6.0	197	13.8	180	4.28	14.13	19.54	20	(0.04)	319	27.32	45	41
6,881,161	0.5	391	0.7	385	1.9	383	0.27	(87.26)	(20.03)	334	8.21	268	13.89	232	41
15,585,683	4.6	208	5.4	232	11.9	226	4.20	10.53	5.62	197	13.57	240	9.56	314	28
5,106,599	1.2	369	1.0	378	3.4§	366	0.72	(84.11)	(12.61)	322	(2.96)	338	9.75	313	20
12,913,882	4.2	231	2.9	333	11.7	235	3.38	—	2.98	232	1.09	312	13.33	245	29
7,222,275	—		—		—		(0.72)‡	—	—		4.00	295	7.76	336	29
6,481,938	—		—		—		(7.46)‡	—	—		(14.62)	383	(2.40)	397	29
3,164,305	2.2	333	3.5	304	9.8	280	6.86	(20.23)	9.18	153	(1.63)	331	14.54	223	41
7,716,746	5.0	184	7.9	131	19.3	82	4.12	3.00	16.37	52	30.40	131	24.95	69	41
8,259,927	5.1	178	5.4	234	15.6§	148	3.26	—	1.58	258	(1.30)	328	10.42	303	41
16,963,225	3.2	276	2.9	330	5.9	344	1.66	13.70	(4.70)	308	42.06	82	6.71	347	38
15,539,715	6.6	114	6.0	200	14.2	172	3.82	1,132.26	1.47	261	47.95	56	8.52	327	28
9,268,949	6.3	127	7.9	132	22.3	46	4.42	25.57	13.28	89	28.39	141	26.08	57	36
3,023,203	1.2	367	1.4	367	4.1	360	1.16	(69.79)	(3.69)	305	40.29	87	12.97	253	30
3,362,269	4.0	244	6.9	165	21.9	54	6.18	1.31	19.58	19	3.97	297	32.76	12	41
3,225,199	2.3	322	1.8	358	11.8§	228	0.89	(38.19)	(0.09)	276	3.42	301	7.06	343	29
7,104,110	5.0	185	4.4	267	9.9	274	4.28	(3.60)	(0.52)	282	5.73	291	5.94	353	38
6,333,732	4.1	236	3.3	313	7.3	321	3.54	(25.00)	(0.35)	279	11.06	258	14.46	224	29
9,111,138	4.9	188	5.7	219	22.2	48	1.75	(9.95)	10.97	123	9.62	261	15.65	205	49
14,229,454	—		—		—		(1.47)	—	—		5.11	293	14.82	220	29
3,305,353	—		—		—		(1.23)	—	—		(0.14)	320	22.27	96	41
8,405,038	4.7	196	8.7	101	23.0	41	2.93	(9.01)	6.10	190	39.39	95	20.82	117	20
18,143,643	10.8	28	11.2	46	26.6	27	2.42	31.76	11.80	110	39.50	94	16.91	181	49
14,197,598	9.1	52	10.6	55	17.5	112	6.80	17.85	8.75	156	34.38	114	12.28	262	38
4,606,621	2.8	302	6.4	185	19.4	80	4.04	11.91	10.45	131	36.76	105	24.32	76	20
8,992,942	6.3	126	3.8	294	6.9	327	3.23	70.90	(2.12)	298	43.55	75	11.76	274	36
3,687,198	6.3	121	6.6	176	49.4	3	4.78‡	—	7.21	179	42.54	78	11.38	285	28
10,556,975	6.8	111	8.9	93	21.2§	60	1.69	19.01	23.48	10	25.85	164	24.85	71	49
21,056,835	8.1	72	8.6	105	10.8	259	4.81	29.65	17.13	42	(20.94)	402	6.88	345	44
3,852,685	2.4	320	1.7	361	10.5	264	1.51	(36.02)	(2.04)	297	4.00	296	9.96	311	29
4,586,950	—		—		—		(1.63)	—	—		31.05	129	2.90	373	44
4,620,400	1.0	372	1.2	373	2.4	379	0.77	(61.88)	(16.09)	328	(3.36)	341	(0.36)	391	45
5,750,305	5.4	167	11.1	48	20.1	70	5.10	10.87	13.84	81	28.95	138	19.66	136	36
201,297	—		—		—		(35.41)	—	—		(75.93)	443	(18.25)	414	33
5,256,375	4.1	238	5.8	213	11.8§	232	2.69	64.02	2.53	242	43.07	76	3.85	367	26

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
51	58	**Hewlett-Packard** (Palo Alto, Calif.)[14]	7,102,000	9.2	516,000	33	5.5	6,287,000	49	4,374,000	29
52	56	**Honeywell** (Minneapolis)	7,086,700¶	7.0	(398,100)	473	—	5,139,000	59	2,221,200	59
53	59	**Johnson & Johnson** (New Brunswick, N.J.)	7,002,900	9.1	329,500	53	(46.3)	5,876,700	52	2,824,200	48
54	46	**Ashland Oil** (Russell, Ky.)[7]	6,991,262	(11.4)	208,571	81	42.2	3,804,749	83	971,044	140
55	53	**Monsanto** (St. Louis)	6,879,000	2.0	433,000	39	—	8,269,000	36	3,781,000	33
56	49	**W.R. Grace** (New York)	6,808,300¶	(6.2)	472,300	36	221.5	4,097,200	78	1,308,600	102
57	50	**Coastal** (Houston)	6,668,200	(8.1)	71,600	190	(49.7)	7,777,300	40	788,900	173
58	57	**TRW** (Cleveland)	6,450,143	(2.5)	217,710	79	—	3,909,300	81	1,197,943	110
59	65	**ConAgra** (Omaha)[15]	5,911,046	7.5	105,285	139	14.8	1,819,696	180	510,549	237
60	66	**Motorola** (Schaumburg, Ill.)	5,888,000	8.2	194,000	89	169.4	4,682,000	66	2,754,000	49
61	80	**Pillsbury** (Minneapolis)[15]	5,847,900	25.2	208,100	82	8.5	3,658,800	88	1,314,200	101
62	68	**Weyerhaeuser** (Tacoma, Wash.)	5,652,029	8.6	276,685	62	38.3	6,557,652	47	3,253,165	41
63	160	**Baxter Travenol Laboratories** (Deerfield, Ill.)	5,634,000	139.2	422,000‡	40	208.0	7,068,000	45	3,370,000	40
64	71	**Northrop** (Los Angeles)	5,608,400	10.9	41,200	260	(80.8)	2,698,800	122	898,700	154
65	61	**Ralston Purina** (St. Louis)[7]	5,514,600	(6.0)	388,700	47	51.6	4,209,900	75	998,900	132
66	83	**International Paper** (New York)[16]	5,501,000	22.2	305,000	57	129.3	7,848,000	39	3,664,000	36
67	76	**Archer Daniels Midland** (Decatur, Ill.)[5]	5,335,975	12.6	230,386	71	40.6	3,315,436	100	2,075,887	61
68	78	**American Brands** (New York)	5,261,179*	12.1	365,304	51	(13.2)	5,362,791	57	2,578,466	52
69	74	**Textron** (Providence)[17]	5,226,300	4.7	239,200	69	(5.0)	5,557,100	55	1,847,200	69
70	77	**Borden** (New York)	5,002,097	6.1	223,312	76	15.2	3,582,189	90	1,438,743	89
71	73	**Colgate-Palmolive** (New York)	4,984,576	(0.7)	177,465	100	62.2	2,845,935	115	979,916	137
72	75	**Texas Instruments** (Dallas)	4,974,000	1.0	29,100‡	302	—	3,336,700	99	1,727,100	72
73	81	**Emerson Electric** (St. Louis)[7]	4,952,900	6.5	408,900	42	1.9	3,769,000	84	2,374,000	57
74	79	**American Home Products** (New York)	4,926,512	5.2	778,824	14	8.6	4,175,123	77	2,380,846	56
75	89	**NCR** (Dayton, Ohio)	4,881,641	13.1	336,524	52	6.8	4,014,991	79	2,396,332	55
76	84	**Bristol-Myers** (New York)	4,835,866	8.8	589,519	28	10.9	4,183,000	76	2,835,572	47
77	85	**Martin Marietta** (Bethesda, Md.)	4,752,537	7.8	202,344	86	(18.9)	2,470,745	135	843,376	158
78	88	**PPG Industries** (Pittsburgh)	4,687,100	7.9	316,400	55	4.5	4,641,400	68	1,977,800	65
79	69	**Aluminum Co. of America** (Pittsburgh)	4,667,200	(9.6)	254,100	66	—	6,766,700	46	3,721,600	34
80	64	**General Mills** (Minneapolis)[15]	4,586,600	(18.9)	183,500	94	—	2,086,200	156	682,500	195
81	90	**CPC International** (Englewood Cliffs, N.J.)	4,548,800	8.1	219,200	78	54.4	3,650,600	89	956,100	141
82	86	**North American Philips** (New York)	4,531,640	3.1	68,520	199	(16.0)	2,885,846	112	1,096,229	122
83	82	**Litton Industries** (Beverly Hills, Calif.)[18]	4,521,005	(1.5)	71,137	192	(76.3)	4,569,321	70	1,019,896	128
84	99	**Pfizer** (New York)	4,476,000	11.2	660,000	23	13.9	5,163,700	58	3,415,200	38
85	67	**IC Industries** (Chicago)	4,439,400	(16.1)	(136,700)	459	—	4,712,900	65	1,528,400	83
86	62	**Champion International** (Stamford, Conn.)	4,387,623	(24.0)	200,832	87	23.1	6,025,690	50	2,592,395	51
87	100	**Campbell Soup** (Camden, N.J.)[18]	4,378,714	9.8	223,225	77	12.8	2,762,785	117	1,538,880	82
88	97	**H.J. Heinz** (Pittsburgh)[19]	4,366,177	7.9	301,734	58	13.4	2,837,364	116	1,360,007	94
89	70	**Bethlehem Steel** (Bethlehem, Pa.)	4,332,900	(15.3)	(152,700)	460	—	4,660,900	67	849,000	157
90	94	**Kimberly-Clark** (Dallas)	4,303,100	5.7	269,400	64	0.9	3,676,000	86	1,919,900	67
91	110	**Merck** (Rahway, N.J.)	4,128,900	16.4	675,700	20	25.2	5,105,200	61	2,569,100	53
92	48	**Amerada Hess** (New York)	4,014,671	(47.5)	(219,443)	465	—	4,914,054	63	2,050,482	63
93	112	**Whirlpool** (Benton Harbor, Mich.)	4,008,702	15.4	199,649	88	9.5	2,202,356	149	1,349,791	98
94	109	**American Cyanamid** (Wayne, N.J.)	3,815,900	4.1	202,500	85	56.9	3,667,000	87	1,720,600	74
95	107	**Eaton** (Cleveland)	3,811,600	3.7	137,600	118	(40.4)	3,025,100	106	1,255,600	108
96	116	**Abbott Laboratories** (North Chicago, Ill.)	3,807,634	13.3	540,460	30	16.1	3,865,609	82	1,778,921	71
97	162	**Hanson Industries North America** (Iselin, N.J.)[7,20]	3,768,541¶	64.6	103,062	143	(7.1)	3,228,043	101	1,694,688	76
98	114	**Time Inc.** (New York)	3,762,087	10.5	376,388	49	88.4	4,299,994	73	1,301,657	103
99	121	**SmithKline Beckman** (Philadelphia)	3,745,400	15.0	521,100	31	1.3	4,222,000	74	1,296,000	105
100	105	**Boise Cascade** (Boise, Idaho)	3,739,970	0.1	101,540	144	(2.6)	3,533,647	92	1,575,063	81

The definitions and concepts underlying the figures in this directory are explained on page 410. ✓ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS 51-100

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE •
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
14,688,000	7.3	91	8.2	118	11.8	230	2.02	5.76	17.43	37	14.64	229	15.05	217	44
3,160,237	—		—		—		(8.83)	—	—		(18.03)	392	13.14	249	36
15,530,400	4.7	202	5.6	223	11.7	236	1.85	(44.94)	4.63	213	27.44	145	12.54	258	42
2,154,430	3.0	290	5.5	230	20.0§	72	6.15	49.27	6.25	189	54.76	41	15.98	201	29
6,198,567	6.3	122	5.2	239	11.5	246	5.55	—	1.00	265	66.42	24	11.42	283	28
2,547,825	6.9	102	11.5	36	36.1	10	11.25	298.94	12.23	105	6.63	278	11.86	272	28
1,342,945	1.1	371	0.9	380	4.9§	353	0.84	(76.73)	(7.67)	312	(9.44)	368	19.74	134	29
2,942,005	3.4	268	5.6	226	18.2	100	7.25	—	6.00	193	(0.90)	326	13.41	242	36
2,219,809	1.8	350	5.8	214	20.6	65	3.05	15.09	9.68	143	36.89	103	41.18	4	20
6,380,885	3.3	273	4.1	278	7.0	322	1.53	150.82	4.31	217	(6.80)	359	8.74	325	36
3,695,825	3.6	261	5.7	220	15.8	141	4.77	7.92	13.33	88	13.06	243	17.27	173	20
7,019,751	4.9	191	4.2	275	8.5§	295	1.91	44.70	(1.93)	295	27.22	146	1.73	380	26
5,489,620	7.5	82	6.0	203	12.5	207	1.70‡	100.00	13.90	80	25.03	171	8.17	330	42
2,177,523	0.7	383	1.5	364	4.6	356	0.89	(80.78)	(0.75)	284	(8.59)	364	21.48	108	41
6,077,944	7.1	99	9.2	83	38.9	6	5.06	60.63	15.70	61	53.09	47	19.49	141	20
5,083,418	5.5	156	3.9	291	8.1§	300	5.79	168.06	0.33	271	53.43	45	5.96	352	26
3,262,232	4.3	221	7.0	161	11.1	251	1.43	32.41	9.21	151	11.96	250	13.40	243	20
5,396,533	6.9	101	6.8	170	13.7§	185	3.18	(13.35)	10.85	125	35.28	111	22.35	95	21
2,629,176	4.6	210	4.3	269	13.0	204	5.79	(14.22)	6.01	192	32.77	122	15.05	216	41
4,199,247	4.5	216	6.2	191	15.5	150	3.00	20.00	9.47	145	38.92	99	21.59	107	20
3,310,804	3.6	260	6.2	190	18.1	102	2.52	81.29	2.60	239	29.30	137	10.09	308	43
4,194,148	0.6	387	0.9	381	1.7	385	0.71‡	—	(16.38)	329	13.91	236	3.35	372	36
7,573,481	8.3	70	10.9	50	17.2	117	5.62	3.50	10.61	129	6.42	282	13.51	241	36
13,484,357	15.8	5	18.7	4	32.7	15	5.18	10.21	11.46	115	27.00	149	14.78	221	42
5,951,531	6.9	105	8.4	111	14.0	173	3.42	8.57	13.82	82	11.74	253	19.93	130	44
14,194,929	12.2	23	14.1	12	20.8	64	4.13	6.99	12.92	97	28.35	142	28.29	34	42
2,660,881	4.3	227	8.2	120	24.0	36	3.67	(15.83)	14.07	75	11.38	255	22.90	86	41
5,197,866	6.8	110	6.8	169	16.0	139	2.66	17.18	8.17	164	46.97	58	20.18	126	32
3,808,440	5.4	162	3.8	297	6.8	329	2.96	—	3.69	227	(9.22)	367	6.16	350	33
4,735,244	4.0	242	8.8	97	26.9	25	4.11	—	7.26	178	45.55	67	15.55	208	20
3,970,397	4.8	193	6.0	198	22.9	43	2.30	57.53	5.97	194	60.79	29	18.89	150	20
1,182,303	1.5	360	2.4	342	6.3	340	2.36	(16.31)	0.02	275	13.79	239	13.26	246	36
2,127,019	1.6	359	1.6	363	7.0	325	2.52	(65.34)	16.69	48	(11.64)	375	21.16	114	36
12,134,086	14.8	9	12.8	19	19.3	83	3.90	13.37	13.09	94	23.72	176	19.19	144	42
3,332,450	—		—		—		(1.24)	—	—		23.93	174	22.16	97	20
3,552,622	4.6	209	3.3	311	7.8	309	2.08	30.82	(3.72)	306	26.17	159	5.38	360	26
4,261,359	5.1	179	8.1	124	14.5	163	3.45	12.75	8.44	159	18.18	201	16.59	187	20
6,207,445	6.9	104	10.6	53	22.2	49	2.20	13.99	15.18	64	28.18	143	27.06	47	20
377,581	—		—		—		(3.37)	—	—		(60.00)	439	(13.26)	411	33
5,192,893	6.3	124	7.3	147	14.0	174	5.87	0.51	8.46	158	22.89	179	19.94	129	26
20,869,353	16.4	3	13.2	18	26.3	29	4.85	27.97	11.12	121	84.74	12	17.26	174	42
2,461,465	—		—		—		(2.60)	—	—		(11.96)	377	8.62	326	29
2,826,700	5.0	183	9.1	88	14.8	159	2.70	8.43	9.85	142	41.32	85	15.19	213	36
4,437,936	5.3	170	5.5	227	11.8	233	4.36	62.69	4.38	216	38.93	98	16.26	193	28
2,389,389	3.6	258	4.6	266	11.0	252	4.29	(38.80)	2.10	253	17.55	205	14.56	222	36
14,086,904	14.2	12	14.0	13	30.4	18	2.32	19.59	19.00	26	35.99	108	25.18	65	42
—	2.7	306	3.2	321	6.1	342	N.A.	—	—		—		—		20
5,317,997	10.0	34	8.8	98	28.9	22	5.95	88.89	13.96	78	14.19	232	19.60	138	27
7,130,545	13.9	16	12.3	26	40.2	5	6.78	3.35	18.81	29	30.07	132	21.16	115	42
2,258,576	2.7	307	2.9	331	6.5	337	3.32	(3.77)	(0.30)	278	31.76	127	10.93	293	26

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
101	119	**Eli Lilly** (Indianapolis)	3,720,400	13.8	558,200	29	7.8	4,595,800	69	2,739,600	50
102	102	**Firestone Tire & Rubber** (Akron, Ohio)[14]	3,712,000	(3.2)	85,000	165	733.3	2,593,000	127	1,167,000	112
103	103	**Dana** (Toledo)	3,695,145	(1.6)	85,872	162	(48.0)	2,525,255	132	954,943	143
104	111	**Quaker Oats** (Chicago)[5]	3,670,700	4.3	179,600	97	14.7	2,033,900	161	831,100	161
105	91	**Dresser Industries** (Dallas)[14]	3,661,300	(10.9)	9,600**	378	—	3,110,200	103	1,613,600	80
106	149	**BASF** (Parsippany, N.J.)	3,645,356	42.0	104,566‡	140	168.5	2,238,550	145	922,971	149
107	118	**Owens-Corning Fiberglas** (Toledo)	3,644,410	10.3	15,643	358	(88.1)	2,194,882	150	(1,025,196)	486
108	108	**Owens-Illinois** (Toledo)	3,641,800	(0.9)	179,200	98	14.8	3,491,300	95	1,677,100	78
109	113	**Reynolds Metals** (Richmond, Va.)	3,638,900	6.5	191,800**	90	—	3,708,800	85	1,342,000	99
110	101	**Borg-Warner** (Chicago)	3,623,400	(8.6)	206,300	83	15.6	2,852,800	114	1,524,800	84
111	96	**Deere** (Moline, Ill.)[14]	3,516,289	(13.4)	(229,272)	466	—	4,974,267	62	1,999,277	64
112	95	**Agway** (DeWitt, N.Y.)[5]	3,510,506	(13.7)	N.A.		—	1,350,023	222	322,163	314
113	98	**American Motors** (Southfield, Mich.)	3,462,504	(14.3)	(91,319)	449	—	2,225,342	147	378,538	289
114	131	**Grumman** (Bethpage, N.Y.)	3,440,125	12.9	78,690	175	(3.5)	1,963,670	169	721,975	184
115	130	**Scott Paper** (Philadelphia)	3,437,000	12.7	186,500	93	(7.3)	3,939,400	80	1,359,300	95
116	129	**Cooper Industries** (Houston)	3,433,296	11.9	147,722	112	9.4	3,400,032	96	1,419,946	91
117	•	**Bayer USA** (Pittsburgh)[21]	3,409,997	6.5	93,790	153	14.8	2,432,521	136	805,422	170
118	104	**Navistar International** (Chicago)[14,22]	3,356,534	(10.5)	1,739**	403	—	1,924,684	172	(123,278)	482
119	106	**Control Data** (Minneapolis)	3,346,700	(9.1)	(264,500)	468	—	2,594,900	126	991,100	136
120	138	**Kellogg** (Battle Creek, Mich.)	3,340,700	14.0	318,900	54	13.5	2,084,200	157	898,400	155
121	115	**American Standard** (New York)	3,324,592	(2.1)	188,467	91	754.7	2,208,436	148	840,958	159
122	124	**United Brands** (Cincinnati)	3,306,733	2.7	53,824	221	132.8	959,002	272	406,811	279
123	126	**Inland Steel** (Chicago)	3,276,242	2.8	19,264	339	—	2,526,557	131	1,067,737	124
124	122	**Teledyne** (Los Angeles)	3,241,400	(0.5)	238,300	70	(56.4)	2,744,200	119	1,636,600	79
125	142	**Mead** (Dayton, Ohio)	3,217,700	17.4	36,300‡	278	(61.2)	2,721,200	120	1,058,900	125
126	136	**Chesebrough-Pond's** (Westport, Conn.)	3,121,272[23]	6.1	N.A.		—	N.A.		N.A.	
127	125	**Warner-Lambert** (Morris Plains, N.J.)	3,102,918	(3.0)	309,484	56	—	2,515,923	133	907,322	152
128	134	**GenCorp** (Akron, Ohio)[24]	3,099,000	2.6	130,000	122	72.8	2,119,000	154	1,048,000	127
129	92	**Armco** (Parsippany, N.J.)	3,085,700¶	(24.9)	(472,000)**	474	—	2,528,100	130	479,300	251
130	93	**Diamond Shamrock** (Dallas)	3,079,200¶	(24.9)	(115,600)	457	—	3,517,400	93	1,395,800	92
131	120	**FMC** (Chicago)	3,002,746	(7.9)	152,529	111	(22.4)	2,685,797	123	(506,602)	485
132	137	**Staley Continental** (Rolling Meadows, Ill.)[7]	2,996,396	2.0	26,186	314	293.5	1,770,232	185	674,621	198
133	135	**Times Mirror** (Los Angeles)	2,920,310	(0.9)	408,085	43	72.1	2,929,081	109	1,300,169	104
134	132	**Celanese** (New York)	2,891,000	(5.1)	213,000	80	19.7	2,361,000	139	956,000	142
135	133	**Avon Products** (New York)	2,883,100	(5.2)	158,700	106	—	2,296,300	143	681,300	196
136	152	**USG** (Chicago)	2,869,872	13.6	225,508	74	0.8	2,006,068	164	584,615	214
137	158	**Gillette** (Boston)	2,818,300	17.4	15,800	357	(90.1)	2,539,500	129	460,800	261
138	173	**Gannett** (Arlington, Va.)	2,801,497	30.2	276,404	63	9.1	3,365,903	98	1,433,781	90
139	145	**Ingersoll-Rand** (Woodcliff Lake, N.J.)	2,799,481	6.1	93,974	152	18.1	2,355,273	142	1,178,365	111
140	141	**Burlington Industries** (Greensboro, N.C.)[7]	2,778,132	(0.9)	56,531	214	349.6	2,181,407	151	1,140,431	115
141	139	**Swift Independent** (Dallas)[14]	2,763,235	(4.5)	4,434	395	—	327,012	446	17,036	478
142	87	**Farmland Industries** (Kansas City, Mo.)[25]	2,690,096	(38.5)	N.A.		—	1,042,804	257	313,258	319
143	150	**Fruehauf** (Detroit)	2,680,000	4.5	N.A.		—	2,265,000	144	N.A.	
144	216	**Triangle Industries** (New York)	2,667,912	57.6	12,928‡	369	(64.9)	3,027,518	105	455,005	262
145	155	**Kidde** (Saddle Brook, N.J.)	2,649,400¶	9.6	25,170‡	318	(65.2)	1,731,167	187	722,659	183
146	161	**Wang Laboratories** (Lowell, Mass.)[5]	2,642,500	12.4	50,900	228	228.4	2,649,300	125	1,447,600	88
147	210	**Johnson Controls** (Milwaukee)[7]	2,639,376	47.7	95,926	149	22.5	1,675,060	195	828,841	162
148	147	**Hercules** (Wilmington, Del.)	2,615,110	1.1	226,733	73	70.3	2,914,319	110	1,703,151	75
149	153	**James River Corp. of Virginia** (Richmond, Va.)[19,26]	2,606,950	4.6	95,288	151	(6.0)	1,972,226	168	744,204	177
150	123	**B.F. Goodrich** (Akron, Ohio)	2,553,300	(21.5)	32,700**	291	—	1,819,700	179	814,700	167

The definitions and concepts underlying the figures in this directory are explained on page 410. √ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS **101-150**

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE*
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
13,140,321	15.0	7	12.2	29	20.4	67	4.01	8.67	10.71	128	36.69	106	16.53	188	42
1,386,346	2.3	327	3.3	315	7.3	320	2.16	3,500.00	2.54	241	20.53	194	6.95	344	30
1,811,875	2.3	324	3.4	307	9.0	289	1.68	(43.05)	(1.89)	294	33.18	117	11.56	277	40
3,834,410	4.9	192	8.8	96	21.3§	59	4.35	15.69	14.18	73	42.71	77	24.90	70	20
2,049,192	0.3	398	0.3	399	0.6	393	0.12**	—	(24.87)	342	10.37	260	2.21	379	45
—	2.9	299	4.7	262	11.3	248	N.A.	—	—		—		—		28
1,151,281	0.4	392	0.7	384	—		0.49	(88.91)	(14.69)	326	(62.66)	441	(5.04)	404	32
3,630,620	4.9	189	5.1	244	10.7	261	2.96	13. 9	0.22	274	105.82	5	19.90	131	32
1,243,057	5.3	171	5.2	243	14.3	169	8.18**	—	7.00	183	7.62	271	4.91	362	33
3,568,290	5.7	147	7.2	148	13.5	189	2.35	16.92	8.36	160	67.21	22	23.88	78	40
1,875,049	—		—		—		(3.38)	—	—		(18.23)	393	1.00	387	45
904,808	—		—		—		N.A.	—	—		—		—		29
534,920	—		—		—		(0.99)	—	—		4.55	294	(2.60)	398	40
955,098	2.3	328	4.0	284	10.2§	270	2.32	(12.45)	2.83	234	(19.52)	398	15.86	202	41
2,885,621	5.4	163	4.7	258	13.7	184	4.96	9.73	9.45	146	26.54	155	16.73	185	26
2,594,013	4.3	223	4.3	268	10.4	267	3.04	8.96	4.84	211	2.21	309	11.44	282	36
—	2.8	304	3.9	293	11.6	237	N.A.	—	—		—		—		28
1,687,952	0.1	406	0.1	405	—		(0.14)**	—	—		(44.12)	428	(15.29)	412	40
1,162,166	—		—		—		(6.48)	—	—		27.11	147	8.79	323	44
7,490,946	9.6	45	15.3	8	35.5	11	2.58	13.16	11.68	113	52.31	48	20.35	123	20
1,580,632	5.7	149	8.5	107	22.4	44	5.15	819.64	10.09	137	15.06	227	18.32	161	45
715,027	1.6	354	5.6	222	13.2	197	3.38	106.10	10.20	134	20.00	196	13.70	238	20
699,693	0.6	386	0.8	382	1.8	384	0.40	—	(22.62)	338	(16.57)	388	(5.01)	403	33
4,004,641	7.4	86	8.7	102	14.6	162	20.35	(56.39)	15.83	58	(2.77)	337	26.81	49	45
2,183,536	1.1	370	1.3	371	3.4	368	1.16‡	(61.59)	(10.73)	320	25.90	162	16.00	199	26
—	—		—		—		N.A.	—	—		76.26	17	16.40	191	43
5,385,566	10.0	36	12.3	28	34.1	14	4.18**	—	7.60	173	26.96	151	11.95	269	42
1,949,293	4.2	232	6.1	194	12.4	210	5.82	73.07	4.25	221	11.38	254	19.26	143	30
532,629	—		—		—		(7.04)**	—	—		(45.33)	429	(9.70)	410	33
1,591,366	—		—		—		(1.16)	—	—		(3.05)	339	(2.85)	400	29
1,462,500	5.1	181	5.7	221	—		1.64	(78.25)	(3.57)	304	(60.45)	440	4.98	361	28
782,555	0.9	377	1.5	365	3.8§	363	0.88	363.16	(9.29)	316	(1.83)	333	9.83	312	20
5,381,544	14.0	14	13.9	14	31.4	17	6.31	80.80	19.93	17	12.92	244	22.63	89	27
—	7.4	85	9.0	90	22.3	47	18.11	32.19	14.51	68	63.53	26	24.33	75	28
2,112,025	5.5	159	6.9	163	23.3	39	2.23	—	(2.59)	302	3.91	299	1.21	385	43
2,107,297	7.9	77	11.2	44	38.6	7	3.54	5.51	21.38	14	53.23	46	26.15	55	32
3,416,366	0.6	388	0.6	387	3.4	367	0.25	(95.17)	(20.82)	336	46.16	63	19.81	133	34
7,408,813	9.9	38	8.2	117	19.3	84	1.71	8.23	13.24	91	22.03	185	19.04	147	27
1,559,165	3.4	269	4.0	285	8.0	307	4.48	18.52	(1.72)	293	8.69	264	2.32	377	45
1,300,123	2.0	339	2.6	338	5.0	351	2.01	356.82	(6.05)	309	35.96	109	10.59	299	22
—	0.2	402	1.4	369	17.5§	113	2,561.00	—	—		—		—		20
—	—		—		—		N.A.	—	—		—		—		29
—	—		—		—		N.A.	—	—		—		—		40
839,535	0.5	390	0.4	394	2.5§	377	0.45‡	(86.57)	—		(23.50)	408	22.95	85	34
787,871	1.0	376	1.5	366	3.4§	369	1.08‡	(67.37)	(9.33)	317	(6.77)	358	12.98	252	36
2,525,682	1.9	346	1.9	355	3.5	365	0.35	218.18	16.56	51	(40.93)	426	28.55	32	44
1,157,669	3.6	256	5.7	218	11.6	240	4.71	(1.88)	9.42	148	(38.86)	425	12.79	255	36
3,278,213	8.7	59	7.8	137	13.3	195	4.02	67.50	5.12	208	32.97	120	11.66	275	28
3,375,290	3.7	255	4.8	256	12.7§	206	1.77	(16.51)	19.95	16	29.99	134	33.31	11	26
1,318,658	1.3	365	1.8	359	3.8§	362	1.32**	—	3.34	229	34.50	113	10.96	292	30

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
151	127	**Combustion Engineering** (Stamford, Conn.)	2,551,469	(18.0)	50,866	229	—	2,161,408	152	686,879	192
152	117	**Kerr-McGee** (Oklahoma City)	2,535,000	(24.2)	(292,000)	470	—	3,090,000	104	1,338,000	100
153	180	**Squibb** (Princeton, N.J.)	2,530,414¶	23.9	396,291**	45	74.9	2,408,831	138	1,358,096	96
154	146	**Interco** (St. Louis)[27]	2,510,740	(4.4)	92,347	155	28.0	1,563,840	200	1,111,293	119
155	177	**Lever Brothers** (New York)	2,474,609	17.9	(18,584)	426	—	836,496	293	150,889	417
156	159	**Lear Siegler** (Santa Monica, Calif.)[5]	2,464,127	3.9	55,510	215	(44.9)	1,556,043	201	626,892	205
157	189	**Schering-Plough** (Madison, N.J.)	2,398,700	24.5	265,800	65	38.0	3,001,100	107	1,458,800	86
158	151	**Penn Central** (Greenwich, Conn.)	2,387,900	(5.5)	154,200	108	39.2	2,932,500	108	2,092,200	60
159	166	**Jim Walter** (Tampa, Fla.)[25]	2,320,466	2.9	138,552	116	24.1	2,859,526	113	1,132,869	117
160	174	**Cummins Engine** (Columbus, Ind.)	2,303,731	7.3	(107,331)	455	—	1,989,945	165	770,343	176
161	165	**Engelhard** (Edison, N.J.)	2,289,531	1.1	53,268	224	24.9	1,043,296	256	561,128	222
162	176	**Upjohn** (Kalamazoo, Mich.)	2,280,325	8.3	252,646	67	24.5	2,664,956	124	1,470,216	85
163	170	**Sherwin-Williams** (Cleveland)	2,253,189¶	2.7	105,952	138	42.0	1,145,647	244	491,569	244
164	181	**R.R. Donnelley & Sons** (Chicago)	2,233,511	9.6	158,268	107	6.6	1,741,251	186	1,005,008	129
165	143	**Kaiser Aluminum & Chemical** (Oakland, Calif.)	2,233,500	(17.3)	(32,700)	433	—	3,218,200	102	1,118,400	118
166	163	**Harris** (Melbourne, Fla.)[5]	2,216,636	(2.8)	59,609	208	(25.8)	1,793,160	181	900,841	153
167	164	**Land O'Lakes** (Arden Hills, Minn.)	2,215,123	(2.3)	N.A.		—	644,133	348	230,699	369
168	182	**Hershey Foods** (Hershey, Pa.)	2,169,614	6.6	132,764	120	18.3	1,356,303	221	727,941	180
169	156	**Singer** (Stamford, Conn.)	2,095,000	(13.3)	82,600**	167	0.4	1,287,900	227	607,000	208
170	211	**Emhart** (Farmington, Conn.)	2,094,300	18.0	(10,200)	424	—	1,856,700	175	717,100	185
171	184	**National Distillers & Chemical** (New York)	2,093,700¶*	6.6	75,600	179	(2.1)	2,904,400	111	912,400	151
172	179	**Rohm & Haas** (Philadelphia)	2,067,000	0.8	138,000	117	(2.3)	1,842,000	176	1,002,000	131
173	200	**Union Camp** (Wayne, N.J.)	2,045,215	9.6	129,934	123	36.6	2,751,482	118	1,370,569	93
174	188	**Great Northern Nekoosa** (Stamford, Conn.)	2,039,200	5.4	85,300	164	84.6	2,077,000	159	1,054,400	126
175	270	**Stone Container** (Chicago)	2,032,325	65.3	35,415	280	837.4	1,523,600	203	481,804	250
176	187	**Tribune** (Chicago)	2,029,813	4.7	292,870	60	136.5	2,588,834	128	1,101,274	120
177	202	**Sterling Drug** (New York)	1,990,434	7.7	171,507	103	56.3	1,723,781	188	973,548	139
178	204	**Pitney Bowes** (Stamford, Conn.)	1,986,686	8.5	167,924	104	11.7	2,027,577	162	912,921	150
179	205	**Air Products & Chemicals** (Allentown, Pa.)[7]	1,982,134	8.3	4,735	392	(96.7)	2,705,730	121	1,100,141	121
180	196	**Alumax** (San Mateo, Calif.)[28]	1,974,333	4.6	70,120	195	11.5	1,787,327	182	782,945	174
181	235	**Geo. A. Hormel** (Austin, Minn.)[14]	1,960,237	30.5	39,079	267	1.2	584,744	366	339,925	305
182	157	**American Petrofina** (Dallas)	1,960,030	(18.6)	(24,569)	430	—	1,776,969	184	654,106	201
183	•	**Premark International** (Northbrook, Ill.)	1,959,000	11.1	(98,300)	451	—	1,406,800	214	580,300	216
184	185	**Morton Thiokol** (Chicago)[5]	1,949,900	(0.4)	132,900	119	(32.8)	1,417,000	213	821,900	164
185	223	**AMP** (Harrisburg, Pa.)	1,933,055	18.2	164,345	105	52.2	1,786,870	183	1,134,865	116
186	171	**Allegheny International** (Pittsburgh)	1,924,194	(11.7)	(164,000)	461	—	1,182,974	238	66,142	463
187	219	**Armstrong World Industries** (Lancaster, Pa.)	1,920,345	14.4	122,425	130	21.3	1,298,205	224	812,964	168
188	198	**Manville** (Denver)	1,920,262	2.1	81,228	169	—	2,513,343	134	973,943	138
189	213	**Knight-Ridder** (Miami)[29]	1,910,650[29]	10.5	140,039	114	5.5	1,947,271	171	815,982	166
190	191	**Apple Computer** (Cupertino, Calif.)[7]	1,901,898	(0.9)	153,963	110	151.5	1,160,128	240	694,087	190
191	225	**Zenith Electronics** (Glenview, Ill.)	1,892,100	16.5	(10,000)	423	—	1,235,000	233	431,600	273
192	144	**Valero Energy** (San Antonio)	1,880,083	(29.4)	(99,888)	452	—	1,697,322	192	377,425	290
193	217	**Corning Glass Works** (Corning, N.Y.)	1,856,300	9.8	177,100	101	32.9	2,360,800	140	1,352,500	97
194	390	**Maytag** (Newton, Iowa)[30]	1,838,465	168.9	111,205	134	54.8	877,449	283	550,639	225
195	276	**West Point-Pepperell** (West Point, Ga.)[7,31]	1,813,354	50.6	54,465	219	92.0	1,442,235	212	674,977	197
196	215	**Westvaco** (New York)[14]	1,811,937	5.2	108,096	137	3.3	2,060,066	160	1,082,791	123
197	218	**Joseph E. Seagram & Sons** (New York)[32,33]	1,809,608*	7.5	246,958	68	(21.4)	5,792,032	54	3,377,952	39
198	194	**PACCAR** (Bellevue, Wash.)	1,795,633	(5.2)	54,283	220	(25.6)	1,079,450	253	726,969	181
199	212	**Black & Decker** (Towson, Md.)[7]	1,791,194	3.4	6,304‡	390	—	1,580,571	199	616,659	206
200	167	**Pennzoil** (Houston)	1,782,177	(20.4)	45,443‡	248	(59.9)	3,369,278	97	695,339	189

The definitions and concepts underlying the figures in this directory are explained on page 410. √ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS 151-200

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE •
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
1,284,677	2.0	340	2.4	343	7.4	316	1.53	—	(0.93)	286	2.80	305	11.32	287	34
1,559,618	—		—		—		(6.01)	—	—		(14.00)	380	1.14	386	29
7,989,276	15.7	6	16.5	7	29.2	21	7.37**	75.48	11.87	109	45.25	69	18.28	162	42
1,240,316	3.7	254	5.9	209	8.3	299	5.84	31.24	1.67	257	8.22	267	10.21	306	23
—	—		—		—		N.A.	—	—		—		—		43
—	2.3	331	3.6	303	8.9	291	3.02	(45.19)	5.61	198	94.14	9	25.61	60	38
5,628,511	11.1	26	8.9	94	18.2	98	4.34	15.12	4.08	223	39.27	96	10.23	305	42
2,098,435	6.5	115	5.3	237	7.4	317	3.85	39.49	—		5.91	289	—		33
1,871,872	6.0	139	4.9	254	12.2	213	4.64	13.50	5.87	196	39.10	97	11.56	278	32
860,385	—		—		—		(10.45)	—	—		(3.63)	343	7.67	337	45
1,113,500	2.3	323	5.1	247	9.5	283	1.31	24.37	—		18.60	199	—		28
8,662,995	11.1	27	9.5	77	17.2	118	4.06	23.40	11.98	108	42.19	81	21.19	113	42
1,568,129	4.7	203	9.3	82	21.6	57	2.31	43.48	19.09	24	26.53	156	21.78	105	28
2,864,004	7.1	96	9.1	87	15.8	144	4.05	4.38	13.77	85	(1.96)	334	21.10	116	27
762,004	—		—		—		(0.89)	—	—		(18.38)	394	1.48	382	33
1,504,951	2.7	310	3.3	312	6.6	332	1.48	(26.00)	2.97	233	12.41	248	9.96	310	36
—	—		—		—		N.A.	—	—		—		—		20
2,446,304	6.1	132	9.8	70	18.2	97	1.42	18.99	9.88	139	46.75	59	26.53	51	20
941,827	3.9	245	6.4	182	13.6	188	3.82**	(11.16)	(0.41)	280	(10.16)	372	7.93	333	36
1,244,730	—		—		—		(0.35)	—	—		3.25	303	15.76	204	34
1,925,304	3.6	257	2.6	337	7.4§	315	2.21	(3.07)	(4.60)	307	27.67	144	13.83	235	28
2,948,736	6.7	113	7.5	144	13.8	182	2.01	0.17	12.66	100	39.75	91	20.22	125	28
3,270,897	6.4	119	4.7	260	9.5	284	2.65	35.90	0.64	270	32.44	124	9.31	319	26
2,379,563	4.2	233	4.1	280	8.1	301	3.20	79.78	2.36	247	58.51	32	16.29	192	26
1,398,950	1.7	351	2.3	344	7.4	318	1.95	712.50	4.30	218	54.96	40	25.30	63	26
3,044,726	14.4	10	11.3	42	26.6	26	7.26	137.25	—		3.91	298	—		27
3,146,300	8.6	61	10.0	65	17.6	110	2.91	59.02	7.67	170	26.87	152	15.56	207	42
3,466,433	8.5	65	8.3	115	18.4	93	2.12	11.58	18.52	33	54.28	42	30.09	22	44
2,526,756	0.2	400	0.2	403	0.4	395	0.08	(96.63)	(23.25)	340	11.95	251	9.52	315	28
—	3.6	262	3.9	290	9.0	290	N.A.	—	—		—		—		33
739,702	2.0	341	6.7	173	11.5	244	2.03	1.00	10.25	132	36.24	107	23.47	81	20
603,272	—		—		—		(2.03)	—	—		(4.70)	351	8.19	329	29
866,813	—		—		—		(2.87)	—	—		—		—		30
2,252,593	6.8	108	9.4	81	16.2	135	2.80	(30.17)	—		3.02	304	22.57	90	28
5,217,005	8.5	62	9.2	84	14.5	165	1.52	52.00	12.53	101	2.24	308	16.79	183	36
—	—		—		—		(17.97)	—	—		(34.32)	420	(1.56)	396	36
1,894,820	6.4	118	9.4	78	15.1	157	2.54	20.95	7.39	175	36.77	104	13.84	234	22
69,003	4.2	228	3.2	318	8.3	298	2.34	—	(1.20)	288	(68.75)	442	(21.71)	416	32
3,142,198	7.3	88	7.2	152	17.2	119	2.41	10.05	11.62	114	19.85	197	20.13	128	27
3,984,693	8.1	73	13.3	17	22.2	50	2.39	141.41	—		84.09	13	—		44
581,116	—		—		—		(0.43)	—	—		6.71	277	0.51	389	36
297,206	—		—		—		(4.36)	—	—		(50.00)	434	—		29
2,932,914	9.5	46	7.5	143	13.1	201	4.04	29.07	5.48	201	(9.12)	365	7.88	334	32
2,314,274	6.1	136	12.7	21	20.2	68	2.57	(3.02)	7.60	172	26.03	161	17.85	166	36
903,594	3.0	289	3.8	296	8.1	303	4.09	48.73	3.84	225	25.87	163	17.16	176	22
2,124,107	6.0	140	5.3	238	10.0	273	2.50	2.74	5.23	206	48.32	55	16.03	198	26
—	13.7	18	4.3	272	7.3	319	N.A.	—	—		—		—		49
990,620	3.0	284	5.0	249	7.5	313	3.02	(24.88)	0.79	267	5.76	290	20.68	119	40
1,155,984	0.4	395	0.4	396	1.0	391	0.11‡	—	(19.97)	333	(22.36)	406	1.22	384	45
3,277,753	2.6	315	1.4	370	4.3§	358	0.72‡	(67.27)	(14.07)	325	8.81	263	20.27	124	29

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
201	242	**Parker Hannifin** (Cleveland)[5]	1,730,248	18.6	88,187	158	4.8	1,269,658	229	672,186	199
202	231	**Brunswick** (Skokie, Ill.)	1,717,361	11.6	110,316	136	10.0	1,874,912	174	690,779	191
203	178	**Mack Trucks** (Allentown, Pa.)	1,711,844	(17.0)	(30,569)**	432	—	1,014,353	263	470,482	255
204	195	**Olin** (Stamford, Conn.)	1,707,261	(9.7)	75,226	180	—	1,544,588	202	654,048	202
205	224	**Int'l. Minerals & Chemical** (Northbrook, Ill.)[5]	1,702,600¶	4.6	(217,000)	464	—	2,427,100	137	994,300	135
206	207	**Koppers** (Pittsburgh)	1,695,876¶	(6.8)	77,480**	177	—	1,016,624	261	479,149	252
207	214	**National Gypsum** (Dallas)	1,694,200	(1.8)	55,339	216	(36.9)	1,656,127	196	91,520	451
208	201	**J.P. Stevens** (New York)[14]	1,671,871	(10.0)	53,687	223	—	961,058	271	502,685	239
209	154	**Revlon Group** (New York)	1,650,000[23]	(32.7)	N.A.		—	N.A.		N.A.	
210	221	**American Hoechst** (Somerville, N.J.)	1,649,689	(0.7)	37,800‡	273	561.2	1,291,449	226	726,458	182
211	257	**Polaroid** (Cambridge, Mass.)	1,629,200	25.8	103,500	142	180.5	1,479,200	207	994,700	134
212	238	**Crown Cork & Seal** (Philadelphia)	1,618,932	8.9	79,441	173	10.8	938,794	274	576,565	218
213	203	**Colt Industries** (New York)	1,616,267	(12.1)	89,270	157	(35.3)	1,145,018	246	(1,077,837)	487
214	208	**General Signal** (Stamford, Conn.)	1,583,368	(12.1)	74,622	183	51.5	1,458,106	211	927,354	148
215	229	**Ethyl** (Richmond, Va.)	1,579,245	2.1	177,734	99	51.7	1,714,291	189	941,121	145
216	241	**Monfort of Colorado** (Greeley, Colo.)[25]	1,576,979	7.8	25,145	319	73.3	255,342	473	114,021	446
217	237	**McGraw-Hill** (New York)	1,576,834	5.7	154,009	109	4.5	1,462,764	210	861,418	156
218	192	**Mapco** (Tulsa)	1,569,909	(17.7)	74,149	186	(28.8)	1,404,615	216	489,564	247
219	248	**New York Times** (New York)	1,564,663	12.3	132,227	121	13.7	1,405,133	215	707,423	187
220	193	**Baker International** (Orange, Calif.)[7]	1,557,211	(18.2)	(272,987)**	469	—	1,515,882	204	683,201	193
221	275	**Stanley Works** (New Britain, Conn.)	1,549,629¶	28.3	78,714	174	0.6	1,207,988	235	555,462	224
222	253	**Fort Howard Paper** (Green Bay, Wis.)	1,549,290	13.6	146,391	113	(6.8)	2,096,345	155	1,202,918	109
223	239	**VF** (Wyomissing, Pa.)	1,544,574	4.3	129,350	124	(7.2)	1,833,761	178	824,141	163
224	266	**Louisiana-Pacific** (Portland, Ore.)	1,506,200	19.5	187,910	92	242.0	1,886,970	173	944,220	144
225	307	**Springs Industries** (Fort Mill, S.C.)	1,504,984	48.5	32,575	293	145.5	1,010,378	265	464,622	259
226	288	**Tyson Foods** (Springdale, Ark.)[7]	1,503,719	32.4	50,289	232	44.4	760,675	311	203,631	382
227	209	**National Semiconductor** (Santa Clara, Calif.)[15]	1,478,100	(17.3)	(91,500)	450	—	1,295,400	225	717,000	186
228	222	**Central Soya** (Fort Wayne, Ind.)[25]	1,475,502	(10.0)	1,797	402	(75.8)	427,078	415	N.A.	
229	232	**Wilson Foods** (Oklahoma City)[18]	1,454,210	(5.2)	(23,514)‡	429	—	220,165	481	36,746	472
230	284	**Masco** (Taylor, Mich.)	1,452,010	25.8	203,420	84	23.7	2,226,150	146	1,157,070	113
231	190	**TRINOVA** (Maumee, Ohio)[24]	1,447,292	(24.7)	122,564	129	64.2	1,167,222	239	549,732	228
232	183	**AMAX** (Greenwich, Conn.)	1,443,700¶	(27.3)	14,300**	365	—	4,397,800	72	801,200	172
233	249	**Cyclops** (Pittsburgh)	1,440,867	4.0	21,266	331	(18.9)	578,563	368	233,515	365
234	244	**Dover** (New York)	1,439,844	0.0	83,829	166	(16.2)	1,029,804	260	627,674	204
235	233	**Gould** (Rolling Meadows, Ill.)	1,437,200¶	(5.5)	(101,800)	453	—	1,265,100	230	557,100	223
236	258	**Sundstrand** (Rockford, Ill.)	1,433,940	11.7	45,400	249	(39.0)	1,399,176	218	604,669	209
237	254	**Mid-America Dairymen** (Springfield, Mo.)	1,420,321	5.7	N.A.		—	319,411	450	126,272	436
238	247	**Square D** (Palatine, Ill.)	1,403,472	0.1	98,928	147	13.5	1,131,988	247	670,789	200
239	236	**Gold Kist** (Atlanta)[5]	1,394,877	(7.0)	N.A.		—	458,140	403	133,849	428
240	274	**International Multifoods** (Minneapolis)[27]	1,355,378	11.9	24,939	320	14.9	625,958	352	227,524	370
241	243	**Witco** (New York)	1,355,018	(6.5)	65,215	203	14.9	819,768	297	465,465	257
242	245	**Tektronix** (Beaverton, Ore.)[15]	1,352,212	(6.0)	39,327	265	(56.4)	1,196,947	236	837,059	160
243	272	**Hasbro** (Pawtucket, R.I.)	1,329,631	9.0	99,159	146	0.2	981,860	268	580,272	217
244	268	**Temple-Inland** (Diboll, Tex.)	1,328,800	6.9	80,800	170	(5.0)	1,700,600	191	928,900	147
245	255	**Amstar** (New York)[5]	1,321,502	0.5	34,713	281	19.0	540,162	376	163,798	410
246	259	**Adolph Coors** (Golden, Colo.)	1,314,930*	2.6	59,393	210	11.2	1,395,922	220	996,140	133
247	169	**Murphy Oil** (El Dorado, Ark.)	1,313,283	(40.2)	(194,750)	463	—	1,980,315	167	776,686	175
248	286	**Becton Dickinson** (Franklin Lakes, N.J.)[7]	1,311,569	14.7	121,930	131	38.6	1,690,916	193	803,925	171
249	168	**Cabot** (Waltham, Mass.)[7]	1,309,915	(40.9)	71,051	193	—	1,509,744	205	591,130	213
250	262	**Thomas J. Lipton** (Englewood Cliffs, N.J.)	1,303,194	2.6	91,458	156	13.7	826,876	295	517,350	236

The definitions and concepts underlying the figures in this directory are explained on page 410. ✓ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS 201-250

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
1,520,181	5.1	180	7.0	162	13.1	199	1.98	(2.94)	7.18	181	3.25	302	14.19	226	41
1,879,713	6.4	117	5.9	211	16.0	140	2.63	12.39	16.89	45	58.17	33	28.72	31	45
504,965	—		—		—		(1.06)**	—	—		2.35	307	—		40
1,048,840	4.4	219	4.9	252	11.5	242	3.36	—	1.02	264	14.39	231	12.12	266	28
879,679	—		—		—		(8.04)	—	—		(20.43)	400	6.32	349	28
996,188	4.6	212	7.6	139	15.6§	147	2.09**	—	(2.42)	301	44.04	72	6.75	346	28
—	3.3	274	3.3	310	60.5	2	6.26	65.17	18.78	30	—		—		32
715,009	3.2	278	5.6	225	10.7	262	3.01	—	0.31	272	26.77	153	16.47	189	22
806,152	—		—		—		N.A.	—	—		16.67	209	7.93	332	43
—	2.3	326	2.9	328	5.2	349	N.A.	—	—		—		—		28
2,194,219	6.4	120	7.0	159	10.4	266	3.34	180.67	3.23	231	56.08	37	8.92	322	38
1,207,346	4.9	190	8.5	109	13.8	181	7.46	14.42	10.14	136	15.06	226	16.91	182	34
407,328	5.5	158	7.8	136	—		0.66	(19.85)	7.19	180	(83.68)	445	(0.92)	392	41
1,420,007	4.7	200	5.1	246	8.1	305	2.60	51.16	2.66	237	(0.77)	324	9.17	321	38
3,543,553	11.3	25	10.4	59	18.9§	89	1.40	53.01	12.05	107	40.12	90	26.81	50	28
334,159	1.6	357	9.9	67	22.1	53	5.84	76.44	—		68.42	21	28.76	30	20
3,581,456	9.8	40	10.5	57	17.9	105	3.04	4.11	14.00	77	16.80	207	25.03	67	27
1,324,389	4.7	197	5.3	236	15.2	155	3.48	(3.33)	1.50	260	59.25	30	7.36	340	29
3,710,455	8.5	66	9.4	80	18.7	91	1.63	12.41	17.38	38	46.33	62	32.56	13	27
1,130,025	—		—		—		(3.89)**	—	—		(29.86)	415	3.60	370	45
1,378,000	5.1	182	6.5	177	14.2	171	1.86	(2.11)	9.30	149	22.82	181	17.67	167	34
3,642,775	9.5	47	7.0	160	12.2	215	2.18	(11.74)	11.04	122	(4.34)	348	20.60	121	26
2,678,215	8.4	67	7.1	156	15.7	145	2.05	(8.89)	22.25	11	21.51	192	34.10	9	23
1,377,994	12.5	21	10.0	64	19.9	73	5.11	229.68	15.78	59	45.87	66	12.02	268	26
522,390	2.2	335	3.2	319	7.0	323	3.66	145.64	7.84	168	16.05	214	20.56	122	22
1,300,614	3.3	271	6.6	174	24.7	35	1.18	34.09	21.56	13	98.51	7	58.27	1	20
1,344,797	—		—		—		(1.10)	—	—		(15.00)	384	5.54	358	36
—	0.1	404	0.4	395	—		N.A.	—	—		—		—		20
80,090	—		—		—		(3.80)‡	—	—		56.52	36	—		20
4,998,584	14.0	13	9.1	86	17.6	111	1.56	21.88	13.24	90	45.95	64	18.41	158	34
968,011	8.5	63	10.5	58	22.3	45	6.96	82.84	7.81	169	46.35	61	12.30	259	45
1,380,690	1.0	374	0.3	398	0.9§	392	0.05**	—	(33.36)	344	(11.01)	373	(8.62)	409	10
373,617	1.5	362	3.7	299	9.1	288	5.26	(21.02)	4.86	209	17.78	204	20.17	127	33
2,055,551	5.8	143	8.1	121	13.4	194	2.42	(14.49)	10.74	127	12.53	246	19.69	135	45
790,816	—		—		—		(2.26)	—	—		(46.19)	430	(1.33)	394	44
1,125,330	3.2	281	3.2	317	7.5	312	2.42	(39.80)	0.91	266	0.79	314	8.14	331	41
—	—		—		—		N.A.	—	—		—		—		20
1,492,910	7.1	98	8.7	100	14.8	160	3.42	13.25	6.28	188	13.08	241	11.23	289	36
—	—		—		—		N.A.	—	—		—		—		20
436,295	1.8	348	4.0	287	10.9§	255	3.04	14.72	3.33	230	(4.67)	350	13.04	251	20
1,004,371	4.8	194	8.0	129	14.0	175	2.93	14.16	9.20	152	48.34	54	22.07	100	29
1,488,453	2.9	298	3.3	314	4.7	354	1.97	(55.33)	1.40	262	22.87	180	8.77	324	38
1,464,225	7.5	84	10.1	60	17.1	123	1.71	(3.66)	31.65	3	12.57	245	48.19	3	47
1,862,569	6.1	134	4.8	257	8.7	294	2.64	(5.71)	—		32.97	119	—		26
—	2.6	312	6.4	180	21.2	61	N.A.	—	—		—		—		20
976,474	4.5	213	4.3	274	6.0	343	1.65	8.55	(2.66)	303	13.07	242	3.72	368	49
1,041,644	—		—		—		(5.76)	—	—		(11.77)	376	15.80	203	29
2,761,300	9.3	51	7.2	150	15.2	154	2.85	35.71	9.99	138	63.85	25	14.12	229	38
936,006	5.4	164	4.7	261	12.0	222	2.49	—	10.49	130	21.57	191	19.49	140	28
—	7.0	100	11.1	47	17.7	109	N.A.	—	—		—		—		20

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
251	256	**Perkin-Elmer** (Norwalk, Conn.)[18]	1,290,558	(1.1)	72,572	188	(11.6)	1,398,613	219	705,748	188
252	246	**NL Industries** (New York)	1,283,203	(9.8)	(324,195)	471	—	1,149,950	242	356,890	300
253	278	**National Service Industries** (Atlanta)[25]	1,282,922	7.7	71,341	191	5.4	710,376	325	462,907	260
254	304	**Dean Foods** (Franklin Park, Ill.)[15]	1,268,580	22.7	40,723	261	28.0	407,926	421	207,220	381
255	269	**Data General** (Westboro, Mass.)[7]	1,267,959	2.3	(28,980)	431	—	1,257,428	231	682,628	194
256	251	**Intel** (Santa Clara, Calif.)	1,265,011	(7.3)	(173,165)	462	—	2,080,066	158	1,275,227	106
257	•	**Foster Wheeler** (Livingston, N.J.)	1,257,858	—	28,027	308	—	1,129,704	248	433,469	272
258	•	**Union Texas Petroleum Holdings** (Houston)	1,255,698	—	(57,488)	445	—	1,949,610	170	(382,094)	484
259	230	**Farley/Northwest Industries** (Chicago)[35]	1,246,400¶	(19.0)	12,100	372	—	1,608,900	197	—	
260	250	**Farmers Union Central Exchange** (St. Paul)[7]	1,220,181¶	(11.3)	N.A.		—	665,242	339	283,246	334
261	260	**Fleetwood Enterprises** (Riverside, Calif.)[19]	1,218,359	(4.6)	39,345	264	(26.6)	442,979	409	288,344	332
262	263	**Federal Co.** (Memphis)[15]	1,216,773	(4.0)	36,657	276	3.0	414,967	420	266,551	343
263	296	**Washington Post** (Washington)	1,215,064	12.7	100,173	145	(12.3)	1,145,227	245	436,590	271
264	294	**Crane** (New York)	1,204,236	9.6	38,378	270	118.1	650,812	343	173,031	405
265	285	**Willamette Industries** (Portland, Ore.)	1,200,155	4.2	74,665	182	23.9	1,099,985	252	521,795	233
266	282	**Weirton Steel** (Weirton, W.Va.)	1,173,812	1.5	45,085	250	(26.1)	548,712	374	131,369	431
267	280	**G. Heileman Brewing** (La Crosse, Wis.)	1,173,786*	0.4	48,300	238	11.5	706,296	327	335,850	307
268	301	**DWG** (Miami Beach)[19]	1,162,360	11.1	(8,611)	417	—	885,537	280	98,576	449
269	267	**Minstar** (Minneapolis)	1,156,362	(7.7)	738	406	(97.6)	1,154,922	241	235,174	362
270	283	**EG&G** (Wellesley, Mass.)	1,145,122	(0.9)	44,897	251	(19.4)	445,173	407	236,331	360
271	317	**E-Systems** (Dallas)	1,135,072	19.6	61,553	206	36.8	627,801	350	376,971	291
272	303	**Dow Jones** (New York)	1,134,867	9.2	183,362	95	32.3	1,235,630	232	727,977	179
273	319	**Avery International** (Pasadena, Calif.)[24]	1,131,204	21.3	48,634	237	0.8	868,136	285	350,010	302
274	264	**Harsco** (Wormleysburg, Pa.)	1,130,253	(10.4)	46,401	245	(23.3)	754,837	312	473,393	254
275	290	**CertainTeed** (Valley Forge, Pa.)	1,114,242	0.4	57,274	213	7.3	812,734	299	499,277	241
276	299	**Pennwalt** (Philadelphia)	1,107,564	5.1	51,947	226	—	996,685	267	374,463	293
277	277	**Norton** (Worcester, Mass.)	1,107,100	(7.2)	(33,100)	434	—	949,000	273	453,100	264
278	302	**Collins & Aikman** (New York)[27]	1,100,699	5.8	66,372	201	5.9	619,528	354	343,209	304
279	261	**NVF** (Yorklyn, Del.)	1,099,900[23]	(13.7)	N.A.		—	N.A.		N.A.	
280	289	**Inspiration Resources** (New York)	1,098,835	(2.1)	37,846**	271	—	780,260	306	316,523	316
281	293	**Rexnord** (Brookfield, Wis.)[14]	1,093,533¶	(0.9)	(103,733)**	454	—	824,488	296	385,675	286
282	298	**Clorox** (Oakland, Calif.)[5]	1,089,070	3.2	95,610	150	11.0	849,225	289	549,793	227
283	336	**Dow Corning** (Midland, Mich.)	1,085,400	20.5	110,600	135	16.2	1,147,900	243	601,700	211
284	425	**Fieldcrest Cannon** (Eden, N.C.)	1,083,236	84.8	17,389	347	33.1	819,102	298	269,389	342
285	292	**Ball** (Muncie, Ind.)	1,070,300	(3.3)	58,900	211	15.0	732,700	317	365,300	296
286	305	**Brockway** (Jacksonville, Fla.)	1,065,618	3.2	30,284	296	68.9	494,309	389	245,533	356
287	343	**National Starch & Chemical** (Bridgewater, N.J.)[36]	1,063,644	20.8	71,806	189	8.8	742,740	313	402,905	280
288	291	**Hartmarx** (Chicago)[24]	1,063,011	(4.2)	24,775	322	(41.9)	621,533	353	358,718	299
289	300	**Mattel** (Hawthorne, Calif.)[33]	1,058,702	0.7	(951)	407	—	705,961	328	152,372	416
290	295	**Timken** (Canton, Ohio)	1,058,055	(3.0)	2,736	399	—	1,403,529	217	806,622	169
291	281	**Asarco** (New York)	1,056,538	(9.5)	9,140	382	—	1,840,314	177	741,524	178
292	206	**Anderson Clayton** (Houston)[5]	1,056,497	(42.1)	16,766	351	1.3	725,643	319	581,081	215
293	240	**Crown Central Petroleum** (Baltimore)	1,051,564	(28.6)	(20,231)	427	—	427,764	414	242,626	358
294	405	**Jefferson Smurfit** (Alton, Ill.)	1,044,313¶	65.7	28,003	309	66.4	653,368	342	141,852	422
295	440	**Winn Enterprises** (Anaheim, Calif.)[37]	1,017,333[23]	86.4	N.A.		—	N.A.		N.A.	
296	327	**American Greetings** (Cleveland)[27]	1,012,451	10.1	74,425	184	0.1	873,302	284	482,964	249
297	312	**General Cinema** (Chestnut Hill, Mass.)[14]	1,012,167	4.7	125,820	125	42.6	1,042,389	258	494,395	243
298	355	**Arvin Industries** (Columbus, Ind.)	995,620	21.3	41,207	259	14.9	803,310	301	260,942	346
299	323	**Brown-Forman** (Louisville)[19]	994,864*	7.2	86,376	160	5.7	1,037,799	259	528,144	232
300	342	**Sun Chemical** (New York)	984,551	11.4	N.A.		—	N.A.		N.A.	

The definitions and concepts underlying the figures in this directory are explained on page 410. ✓ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS 251-300

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE •
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
1,494,079	5.6	151	5.2	241	10.3	268	1.61	(12.50)	11.44	116	(15.67)	385	11.39	284	38
354,482	—		—		—		(5.80)	—	—		(32.96)	419	2.31	378	28
1,316,839	5.6	155	10.0	62	15.4	151	2.17	5.21	12.39	104	18.01	202	25.40	62	36
829,480	3.2	279	10.0	63	19.7	76	1.53	(0.65)	17.74	36	(0.18)	321	31.76	18	20
934,196	—		—		—		(1.07)	—	—		(34.71)	421	2.70	374	44
4,092,612	—		—		—		(1.48)	—	—		(28.21)	413	10.32	304	36
560,777	2.2	332	2.5	339	6.5	335	0.81	6.58	2.26	249	6.49	280	13.15	248	45
—	—		—		—		(1.02)	—	—		—		—		10
—	1.0	375	0.8	383	—		N.A.	—	—		—		—		23
—	—		—		—		N.A.	—	—		—		—		29
684,655	3.2	277	8.9	92	13.7	187	1.69	(26.20)	14.15	74	6.15	285	13.94	231	37
818,338	3.0	286	8.8	95	13.8	183	2.24	2.75	2.38	246	44.83	70	27.24	46	20
2,057,633	8.2	71	8.8	99	22.9	42	7.80	(9.93)	19.08	25	32.37	125	30.53	21	27
576,286	3.2	280	5.9	210	22.2	51	2.80	118.75	2.73	236	29.36	136	14.15	228	45
1,568,809	6.2	129	6.8	171	14.3	168	2.94	24.05	5.58	199	35.51	110	13.22	247	26
—	3.8	251	8.2	116	34.3	13	N.A.	—	—		—		—		33
746,211	4.1	235	6.8	166	14.4	166	1.83	10.91	15.28	63	19.43	198	29.08	29	49
85,576	—		—		—		(0.55)	—	—		47.00	57	7.50	339	22
372,966	0.1	405	0.1	406	0.3	398	0.04	(97.98)	(20.16)	335	(1.11)	327	19.14	145	47
939,289	3.9	246	10.1	61	19.0	87	1.65	(20.29)	17.20	41	(25.23)	411	22.69	88	38
1,038,087	5.4	165	9.8	69	16.3	134	2.00	36.05	11.40	118	2.49	306	21.61	107	36
5,166,413	16.2	4	14.8	10	25.2	33	1.89	31.86	19.50	22	25.67	165	24.62	73	27
976,374	4.3	224	5.6	224	13.9	179	2.45	0.41	14.02	76	15.35	223	17.30	172	26
873,164	4.1	237	6.2	193	9.8	276	1.56	(23.15)	1.56	259	15.63	220	17.90	165	37
730,807	5.1	177	7.1	157	11.5	245	3.02	10.62	1.87	255	21.92	187	7.27	341	32
655,643	4.7	205	5.2	240	11.3§	249	3.64	—	0.22	273	21.84	188	11.05	291	28
930,020	—		—		—		(1.63)	—	—		0.82	313	12.21	264	32
—	6.0	137	10.7	51	19.3	81	3.06	5.15	13.94	79	69.44	19	29.75	25	22
—	—		—		—		N.A.	—	—		(80.00)	444	(19.75)	415	33
396,829	3.4	265	4.9	253	12.0	224	0.59**	—	—		(5.00)	352	—		10
654,050	—		—		—		(4.14)**	—	—		33.40	116	7.21	342	45
1,594,943	8.8	57	11.3	43	17.4	115	3.60	10.09	11.43	117	9.42	262	21.40	109	43
—	10.2	33	9.6	76	18.4	94	N.A.	—	—		—		—		28
353,734	1.6	356	2.1	349	6.5	336	2.11	25.97	2.21	250	95.44	8	20.64	120	22
904,023	5.5	160	8.0	125	16.1	136	2.56	14.29	13.80	83	16.56	210	27.60	41	34
401,448	2.8	301	6.1	195	12.3	211	2.44	67.12	0.76	269	21.63	190	10.68	296	32
—	6.8	109	9.7	74	17.8	107	N.A.	—	—		—		—		28
559,301	2.3	321	4.0	286	6.9	328	1.20	(46.75)	5.31	204	6.02	286	18.39	159	23
439,926	—		—		—		(0.20)	—	—		(32.65)	418	5.44	359	47
663,729	0.3	399	0.2	400	0.3	397	0.22	—	(27.46)	343	(1.80)	332	2.62	375	45
668,897	0.9	379	0.5	391	1.2	389	(0.46)	—	—		(19.05)	396	1.26	383	33
—	1.6	358	2.3	345	2.9	371	N.A.	—	—		—		—		20
113,310	—		—		—		(3.66)	—	—		(27.78)	412	3.87	366	29
1,051,857	2.7	311	4.3	271	19.7	74	1.46	66.86	—		187.70	1	—		26
—	—		—		—		N.A.	—	—		—		—		20
1,009,796	7.4	87	8.5	108	15.4	152	2.32	(1.28)	16.13	55	(17.87)	391	21.81	104	27
1,867,600	12.4	22	12.1	34	25.5	32	3.43	47.21	24.61	9	15.90	216	23.64	79	49
595,639	4.1	234	5.1	245	15.8	143	2.46	11.31	1.67	256	30.93	130	19.40	142	40
1,304,695	8.7	58	8.3	113	16.4	133	4.02	17.20	19.53	21	16.37	212	26.01	58	49
819,660	—		—		—		N.A.	—	—		—		—		28

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK 1986	RANK 1985	COMPANY	SALES $ THOUSANDS	SALES PERCENT CHANGE	NET INCOME $ THOUSANDS	NET INCOME RANK	NET INCOME PERCENT CHANGE	ASSETS $ THOUSANDS	ASSETS RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	STOCKHOLDERS' EQUITY RANK
301	335	**Lubrizol** (Wickliffe, Ohio)	976,776	8.1	78,185	176	29.8	877,907	282	572,679	221
302	316	**Potlatch** (San Francisco)	976,373	2.7	69,943	197	85.7	1,219,573	234	574,566	220
303	345	**McCormick** (Hunt Valley, Md.)[24]	975,727	11.8	29,739	299	6.9	628,924	349	271,616	340
304	•	**HIMONT** (Wilmington, Del.)[14]	973,885	—	97,334	148	—	910,032	276	450,622	267
305	388	**Esselte Business Systems** (Garden City, N.Y.)	972,832	39.9	45,854	246	33.3	794,535	302	346,249	303
306	344	**Outboard Marine** (Waukegan, Ill.)[7]	971,828	10.4	14,339	364	(51.2)	775,009	309	392,478	282
307	356	**Harcourt Brace Jovanovich** (Orlando, Fla.)	968,555✓	18.3	7,476	388	(85.2)	1,709,495	190	531,477	231
308	322	**Gerber Products** (Fremont, Mich.)[37]	967,865	4.1	45,495	247	(19.3)	601,190	358	374,500	292
309	329	**Fairchild Industries** (Chantilly, Va.)	967,300¶	5.5	(9,962)**	422	—	544,314	375	28,873	475
310	320	**A.O. Smith** (Milwaukee)	964,681	3.5	28,987	304	(29.6)	693,248	333	283,864	333
311	318	**Lafarge** (Dallas)	963,800	2.0	26,000	315	83.9	976,500	269	491,100	245
312	347	**Sonoco Products** (Hartsville, S.C.)	963,796	10.8	54,676	217	10.7	559,459	372	332,890	309
313	416	**Nortek** (Providence)	962,765	59.6	29,000‡	303	64.8	1,015,161	262	240,829	359
314	332	**Tyler** (Dallas)	961,411	5.4	11,945	373	(22.3)	501,707	387	181,989	397
315	419	**Illinois Tool Works** (Chicago)	961,077	61.2	79,583	172	152.3	1,276,230	228	476,550	253
316	309	**Vulcan Materials** (Birmingham, Ala.)	957,796	(2.4)	93,217	154	30.7	834,659	294	506,567	238
317	•	**Chicago Pacific** (Chicago)	954,936	963.2	28,788**	306	(37.7)	1,184,617	237	330,313	311
318	313	**Clark Equipment** (South Bend, Ind.)	954,043	(1.0)	(60,598)	446	—	897,212	277	393,168	281
319	363	**Federal Paper Board** (Montvale, N.J.)	948,560	21.0	18,410‡	345	64.4	1,053,133	255	337,852	306
320	338	**Federal-Mogul** (Southfield, Mich.)	941,612	5.2	3,606[33]	397	(93.1)	739,445	316	320,470	315
321	328	**Sheller-Globe** (Toledo)[7]	940,000[23]	2.4	N.A.		—	N.A.		N.A.	
322	392	**Wheeling-Pittsburgh Steel** (Pittsburgh)	934,450	37.2	(250,923)	467	—	910,549	275	(216,946)	483
323	359	**Figgie International** (Richmond, Va.)[38]	919,818	14.5	42,426	256	45.1	587,945	363	292,766	328
324	334	**Bowater** (Darien, Conn.)	919,690	1.7	49,444	234	(26.8)	1,600,665	198	451,923	266
325	311	**Varian Associates** (Palo Alto, Calif.)[7]	912,139	(6.2)	(14,870)‡	425	—	790,155	303	410,930	276
326	333	**Dayco** (Dayton, Ohio)[14,39]	911,002	0.6	3,116	398	(79.4)	511,393	384	236,246	361
327	337	**Household Manufacturing** (Prospect Heights, Ill.)[40]	910,345	1.2	(42,833)	441	—	603,767	357	325,572	312
328	365	**Echlin** (Branford, Conn.)[25]	901,890	16.9	48,844	235	7.1	685,750	336	423,043	274
329	•	**International Controls** (Boca Raton, Fla.)	901,735¶	536.4	(6,879)	414	—	538,535	377	59,166	466
330	310	**Quaker State Oil Refining** (Oil City, Pa.)	899,065	(7.7)	50,288	233	9.6	665,042	340	390,661	283
331	350	**M/A-Com** (Burlington, Mass.)[7]	886,132¶	4.4	8,800‡	384	(77.7)	894,584	278	453,853	263
332	352	**Champion Spark Plug** (Toledo)	883,836	6.6	17,216	349	13.3	647,724	344	351,763	301
333	346	**Lone Star Industries** (Greenwich, Conn.)	883,415	1.3	117,370	133	101.3	1,466,465	209	631,900	203
334	368	**Deluxe Check Printers** (St. Paul)	866,829	13.4	121,109	132	16.2	660,969	341	413,132	275
335	362	**Bemis** (Minneapolis)	864,670	9.9	25,631	317	11.4	495,472	388	194,010	388
336	398	**Smithfield Foods** (Arlington, Va.)[19]	864,324	29.2	4,660‡	393	34.8	127,614	488	24,298	477
337	366	**Prime Computer** (Natick, Mass.)	860,173	11.8	46,925	243	(18.8)	687,360	335	437,830	270
338	371	**Bell & Howell** (Skokie, Ill.)	853,409	12.3	32,895	290	2.2	766,651	310	272,951	338
339	373	**Cincinnati Milacron** (Cincinnati)	849,994	16.1	23,328	326	—	725,545	320	289,143	331
340	340	**Phelps Dodge** (New York)	845,941	(4.6)	61,400**	207	108.1	2,018,727	163	934,866	146
341	432	**Rorer Group** (Fort Washington, Pa.)	844,578	50.6	125,643	126	241.3	1,110,051	249	390,378	284
342	331	**Mitchell Energy** (The Woodlands, Tex.)[33]	843,925	(7.7)	48,233	239	35.2	2,120,875	153	575,756	219
343	308	**General Instrument** (New York)[27]	841,445	(15.3)	(66,543)	447	—	778,967	307	550,388	226
344	375	**Newmont Mining** (New York)	834,077¶	14.4	74,219	185	—	1,981,500	166	1,451,874	87
345	324	**Fuqua Industries** (Atlanta)	830,234¶	(10.1)	39,575	263	19.1	719,257	322	246,434	355
346	473	**Harnischfeger Industries** (Brookfield, Wis.)[14,41]	829,958¶	71.5	1,310	404	(91.9)	966,924	270	212,207	378
347	353	**Tecumseh Products** (Tecumseh, Mich.)	821,122	(1.0)	50,715	230	(15.6)	677,455	337	517,943	235
348	273	**Louisiana Land & Exploration** (New Orleans)	818,400	(32.5)	(20,600)	428	—	1,680,200	194	604,100	210
349	393	**Macmillan** (New York)	817,797	20.8	59,500	209	31.1	807,130	300	297,795	325
350	437	**Liz Claiborne** (New York)	813,497	46.2	86,194	161	42.3	335,502	443	247,787	353

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INDUSTRIAL CORPORATIONS 301-350

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE *
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
1,523,135	8.0	74	8.9	91	13.7	186	1.97	32.21	4.57	215	15.90	217	10.19	307	28
1,041,208	7.2	93	5.7	217	12.0§	223	4.98	127.40	4.62	214	57.21	34	9.45	316	26
582,580	3.1	283	4.7	259	11.0	253	2.46	8.37	8.28	163	17.51	206	11.93	271	20
2,775,973	10.0	35	10.7	52	21.6	56	2.17	57.25	—		—		—		28
822,041	4.7	198	5.8	215	13.2	196	2.24	32.54	—		27.02	148	—		26
570,201	1.5	363	1.9	357	3.7	364	0.85	(51.15)	(6.36)	310	(1.46)	329	11.84	273	45
1,325,464	0.8	381	0.4	393	1.4	386	1.91	18.14	11.32	119	10.55	259	21.84	103	27
859,688	4.7	204	7.6	141	12.2	216	2.23	(19.49)	5.97	195	0.54	315	19.86	132	20
189,484	—		—		—		(1.58)**	—	—		(4.18)	347	13.94	230	41
235,273	3.0	288	4.2	276	10.2	269	3.07	(42.62)	2.75	235	(8.26)	362	10.90	294	40
462,963	2.7	308	2.7	334	5.3	347	0.58	87.10	—		14.16	233	—		32
1,007,807	5.7	148	9.8	71	16.4	132	2.50	10.62	11.76	111	26.09	160	25.14	66	26
240,797	3.0	287	2.9	332	12.0	221	2.00‡	31.36	56.63	1	16.06	213	21.20	112	36
240,512	1.2	366	2.4	341	6.6	334	0.66	(19.51)	(2.38)	300	(16.21)	387	11.46	281	28
1,854,504	8.3	69	6.2	189	16.7	127	3.11	148.80	13.78	84	50.59	51	17.53	170	34
1,464,610	9.7	42	11.2	45	18.4	92	8.40	36.59	10.17	135	40.47	86	21.89	102	10
433,674	3.0	285	2.4	340	8.7§	293	3.34**	(41.51)	—		44.57	71	—		36
488,885	—		—		—		(3.23)	—	—		(21.78)	405	(2.75)	399	45
646,813	1.9	344	1.8	360	5.5	345	0.84‡	55.56	(7.69)	313	43.62	74	16.17	195	26
551,571	0.4	394	0.5	392	1.1	390	0.28	(92.80)	(18.38)	332	8.16	269	18.96	149	45
—	—		—		—		N.A.	—	—		—		—		40
42,835	—		—		—		(50.75)	—	—		(6.06)	354	(7.81)	408	33
546,729	4.6	207	7.2	149	14.5	164	6.31	(37.28)	6.07	191	37.18	102	22.51	91	36
1,409,934	5.4	168	3.1	324	10.9	254	1.51	(34.35)	—		26.55	154	—		26
600,964	—		—		—		(0.70)‡	—	—		(19.26)	397	13.58	239	36
254,148	0.3	396	0.6	388	1.3	387	0.39	(80.88)	(17.62)	331	55.37	39	11.63	276	30
—	—		—		—		N.A.	—	—		—		—		34
1,246,638	5.4	166	7.1	154	11.6	241	1.11	0.91	9.15	154	39.53	93	14.27	225	40
93,669	—		—		—		(2.01)	—	—		(23.43)	407	35.86	6	37
750,630	5.6	153	7.6	142	12.9	205	2.01	5.24	5.58	200	6.46	281	9.99	309	29
484,815	1.0	373	1.0	379	1.9	382	0.20‡	(78.26)	(1.24)	289	(14.46)	382	18.73	154	36
508,752	2.0	343	2.7	335	4.9	352	(0.45)	—	—		15.17	225	4.51	364	36
659,520	13.3	20	8.0	127	17.2§	120	7.01	132.12	11.13	120	13.97	235	10.90	295	32
3,084,823	14.0	15	18.3	5	29.3	20	1.42	16.87	18.73	31	53.63	44	31.80	16	27
415,396	3.0	292	5.2	242	13.2	198	1.85	12.80	9.23	150	29.46	135	23.05	84	26
109,294	0.5	389	3.7	300	19.2	86	1.95‡	59.84	12.89	98	86.84	11	31.77	17	20
992,649	5.5	161	6.8	167	10.7	260	0.97	(19.17)	28.58	7	(24.28)	410	29.24	27	44
401,034	3.9	248	4.3	270	12.1	219	3.10	1.31	15.88	57	21.31	193	15.13	214	38
604,715	2.7	305	3.2	320	8.1	304	0.98	—	8.09	166	15.81	218	16.66	186	33
835,721	7.3	92	3.0	325	6.4§	338	1.79**	193.44	(1.63)	292	(9.78)	369	(4.42)	401	33
951,171	14.9	8	11.3	41	32.2	16	5.78	236.05	12.95	96	7.61	272	15.31	211	42
644,912	5.7	145	2.3	347	8.4	296	1.01	36.49	8.15	165	(12.25)	378	8.50	328	10
861,350	—		—		—		(2.07)	—	—		7.72	270	12.54	257	36
2,755,471	8.9	53	3.8	298	5.1	350	2.44	—	2.64	238	32.92	121	12.14	265	33
676,157	4.8	195	5.5	228	16.1	137	1.86	15.53	17.21	40	(37.50)	424	18.87	151	45
354,165	0.2	403	0.1	404	—		(1.14)	—	—		15.53	221	0.51	388	45
694,709	6.2	130	7.5	145	9.8	277	9.27	(15.57)	3.79	226	8.27	266	15.58	206	45
1,138,800	—		—		—		(0.71)	—	—		(6.67)	356	5.58	357	10
1,275,931	7.3	90	7.4	146	20.0	71	2.59	25.12	14.87	67	14.75	228	30.80	19	27
2,575,122	10.6	31	25.7	1	34.8	12	2.00	40.85	—		77.27	14	—		23

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
351	330	**Chromalloy American** (St. Louis)	813,000[42]	(11.4)	N.A.		—	N.A.		N.A.	
352	376	**Economics Laboratory** (St. Paul)[5]	812,920	11.8	43,686	253	10.6	475,148	397	261,586	345
353	252	**Pacific Resources** (Honolulu)	811,292	(40.5)	27,783	310	53.0	478,464	393	199,404	384
354	•	**Cyprus Minerals** (Englewood, Colo.)	810,822	14.8	21,125	333	—	1,106,263	251	816,765	165
355	265	**Hughes Tool** (Houston)	806,070	(36.1)	(475,849)	475	—	1,472,332	208	444,709	268
356	361	**United Merchants & Manufacturers** (New York)[5]	802,105	0.9	(35,340)	436	—	575,628	369	115,290	443
357	367	**Armstrong Rubber** (New Haven, Conn.)[7]	800,136	4.2	(37,608)	438	—	521,482	381	182,647	396
358	394	**Raychem** (Menlo Park, Calif.)[5]	797,632	18.1	48,790	236	72.7	785,592	305	452,464	265
359	395	**Tyco Laboratories** (Exeter, N.H.)[15]	796,351	18.2	37,500	274	6.8	591,908	360	210,303	379
360	397	**Rubbermaid** (Wooster, Ohio)	795,184	18.4	70,050	196	22.6	579,180	367	359,430	298
361	382	**A.H. Robins** (Richmond, Va.)	789,895	11.9	81,796	168	7.9	838,811	291	49,049	469
362	234	**Tosco** (Santa Monica, Calif.)	780,278	(48.4)	17,580**	346	98.3	491,889	390	150,253	419
363	315	**Allis-Chalmers** (West Allis, Wis.)	771,188	(19.8)	(8,581)	416	—	—		—	
364	409	**Tandem Computers** (Cupertino, Calif.)[7]	767,793	23.0	63,766	204	85.5	705,025	329	534,680	230
365	326	**CF Industries** (Long Grove, Ill.)	766,139	(16.8)	N.A.		—	841,804	290	466,035	256
366	354	**Reichhold Chemicals** (White Plains, N.Y.)	765,588	(6.9)	15,859	355	—	458,446	402	196,087	385
367	378	**Anchor Hocking** (Lancaster, Ohio)	757,820	5.2	6,562	389	174.8	508,090	385	247,250	354
368	370	**Mohasco** (Amsterdam, N.Y.)	757,710	(0.3)	15,835	356	(7.2)	385,595	429	226,563	371
369	372	**Nucor** (Charlotte, N.C.)	755,229	(0.4)	46,439	244	(20.6)	571,608	370	383,699	287
370	385	**Worthington Industries** (Columbus, Ohio)[15]	754,317	7.7	41,987	257	8.6	435,717	412	233,606	364
371	374	**GAF** (Wayne, N.J.)	753,774	3.0	80,686**	171	4.0	1,347,069	223	601,498	212
372	348	**Amdahl** (Sunnyvale, Calif.)	746,690	(13.4)	41,829	258	45.7	1,054,101	254	500,704	240
373	379	**Briggs & Stratton** (Wauwatosa, Wis.)[5]	745,831	3.9	34,080	285	1.7	436,622	411	293,517	326
374	357	**Insilco** (Meriden, Conn.)	745,059	(8.2)	33,345	288	27.7	718,598	323	330,560	310
375	391	**Nalco Chemical** (Naperville, Ill.)	736,074	7.9	63,672	205	(13.2)	586,363	365	407,470	278
376	349	**Interlake** (Oak Brook, Ill.)	736,009	(13.4)	32,555	294	15.5	597,059	359	250,362	349
377	401	**Ferro** (Cleveland)	725,241	11.4	24,082	324	170.8	449,348	405	223,297	372
378	339	**National Coop. Refinery** (McPherson, Kans.)[5]	715,873	(20.0)	N.A.		—	298,982	456	120,869	439
379	417	**Masco Industries** (Taylor, Mich.)	712,260	18.9	9,390‡	380	223.8	1,489,070	206	335,530	308
380	383	**Interstate Bakeries** (Kansas City, Mo.)[15]	708,483	0.7	15,332	361	103.5	194,021	485	86,642	455
381	410	**Nashua** (Nashua, N.H.)	704,221	13.3	20,635	334	25.7	322,964	447	174,701	404
382	399	**Dennison Manufacturing** (Framingham, Mass.)	701,059	6.0	30,254	297	351.0	469,184	398	230,959	368
383	411	**Wm. Wrigley Jr.** (Chicago)	698,982	12.7	53,818	222	23.7	394,352	427	292,962	327
384	418	**Bausch & Lomb** (Rochester, N.Y.)	698,867	17.2	74,695	181	11.9	885,708	279	490,761	246
385	407	**Flowers Industries** (Thomasville, Ga.)[5]	698,394	11.5	29,531	300	15.2	377,849	432	161,842	413
386	396	**Storage Technology** (Louisville, Colo.)	696,009	3.4	36,180**	279	—	879,639	281	(18,060)	481
387	422	**Telex** (Tulsa)[37]	695,043	17.6	67,493	200	26.5	535,790	378	270,282	341
388	360	**Joy Manufacturing** (Pittsburgh)[7]	692,755	(13.4)	(83,884)	448	—	607,606	356	314,527	317
389	•	**York International** (York, Pa.)	689,979	165.9	8,217	386	(74.2)	396,342	426	179,752	401
390	414	**AM International** (Chicago)[18,43]	688,910	12.6	5,707**	391	(77.6)	1,013,908	264	249,670	350
391	421	**Snap-on Tools** (Kenosha, Wis.)	670,086	13.3	65,496	202	9.7	526,580	379	382,952	288
392	408	**Sealed Power** (Muskegon, Mich.)	665,807	6.6	28,500	307	(4.7)	518,257	382	272,893	339
393	465	**Loral** (New York)[37]	663,818	32.2	52,993	225	26.0	695,926	332	309,346	322
394	386	**Southwest Forest Industries** (Phoenix)	660,342	(5.7)	(1,700)	408	—	647,352	345	215,254	375
395	380	**Consolidated Papers** (Wisconsin Rapids, Wis.)	653,040	(8.8)	87,542	159	(18.1)	723,181	321	546,722	229
396	404	**Dexter** (Windsor Locks, Conn.)	650,051	2.6	33,635	286	17.7	565,871	371	258,843	348
397	403	**Eagle-Picher Industries** (Cincinnati)[24]	648,337	1.0	38,808	269	—	477,078	394	179,476	402
398	•	**Texas Industries** (Dallas)[15]	648,230	88.6	22,114	330	25.7	708,783	326	194,083	387
399	351	**Big Three Industries** (Houston)	645,962¶	(22.6)	(4,505)	410	—	838,580	292	464,675	258
400	461	**Hillenbrand Industries** (Batesville, Ind.)[24]	641,067	26.3	50,523	231	53.9	587,275	364	290,914	329

The definitions and concepts underlying the figures in this directory are explained on page 410. √ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS 351-400

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE *
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
—	—		—		—		N.A.	—	—		—		—		34
815,696	5.4	169	9.2	85	16.7	126	1.62	11.72	8.30	162	14.11	234	10.60	298	43
253,178	3.4	266	5.8	212	13.9	177	1.42	52.69	2.59	240	32.58	123	18.17	164	29
648,943	2.6	313	1.9	356	2.6	376	0.81	—	—		(2.26)	336	—		10
704,692	—		—		—		(8.50)	—	—		(31.84)	417	(1.42)	395	45
109,440	—		—		—		(3.88)	—	—		(28.29)	414	1.71	381	22
191,285	—		—		—		(3.64)	—	—		(9.86)	370	14.85	219	30
1,118,291	6.1	133	6.2	192	10.8	258	4.65	63.73	26.54	8	(9.14)	366	17.34	171	36
875,376	4.7	201	6.3	186	17.8	106	2.17	16.35	19.68	18	75.18	18	27.88	38	34
1,968,555	8.8	56	12.1	33	19.5	78	0.96	21.52	15.61	62	42.20	80	25.28	64	30
480,208	10.4	32	9.8	72	166.8	1	3.38	8.33	10.91	124	(30.77)	416	(1.23)	393	42
79,143	2.3	330	3.6	301	11.7	234	0.53**	82.76	4.85	210	(48.39)	433	(7.22)	406	29
39,906	—		—		—		(1.09)	—	—		(36.36)	423	(18.24)	413	45
2,991,399	8.3	68	9.0	89	11.9	225	1.44	75.61	—		53.93	43	—		44
446,959	—		—		—		N.A.	—	—		—		—		28
315,794	2.1	338	3.5	305	8.1	302	2.13	—	(0.89)	285	0.45	316	9.42	317	28
327,484	0.9	378	1.3	372	2.7	375	0.63	173.91	(13.56)	323	16.00	215	10.43	302	32
309,952	2.1	337	4.1	281	7.0§	324	1.72	(1.53)	2.18	251	26.99	150	10.61	297	25
758,085	6.2	131	8.1	123	12.1	218	2.17	(20.80)	16.92	44	(14.39)	381	27.48	42	33
980,329	5.6	154	9.6	75	18.0	104	1.52	8.57	18.88	27	13.88	237	22.48	92	33
1,549,778	10.7	29	6.0	199	13.4	193	8.08**	259.11	29.59	5	24.97	172	22.87	87	28
1,863,400	5.6	152	4.0	288	8.4	297	0.86	43.33	(15.62)	327	61.60	28	10.52	300	44
553,229	4.6	211	7.8	135	11.6	239	2.36	1.72	2.14	252	22.09	184	6.02	351	45
525,925	4.5	214	4.6	264	10.1	271	1.58	21.09	3.51	228	7.41	273	15.27	212	28
1,320,491	8.7	60	10.9	49	15.6	146	1.62	(13.37)	4.09	222	6.80	276	9.36	318	28
491,433	4.4	217	5.5	231	13.0	202	2.85	12.43	(1.47)	291	76.96	15	16.78	184	34
348,492	3.3	272	5.4	235	10.8	257	1.20	(9.09)	(7.72)	314	25.49	167	11.35	286	28
—	—		—		—		N.A.	—	—		—		—		29
1,214,400	1.3	364	0.6	386	2.8	373	0.20	166.67	—		111.63	4	—		34
221,234	2.2	336	7.9	133	17.7	108	2.95	92.81	20.16	15	(4.50)	349	12.28	261	20
276,707	2.9	296	6.4	184	11.8	229	2.13	23.12	8.70	157	49.62	52	13.78	237	44
492,668	4.3	222	6.5	179	13.1	200	1.94	351.16	4.72	212	6.28	283	19.53	139	26
770,566	7.7	78	13.7	15	18.4	95	2.55	23.79	6.94	185	52.06	49	12.27	263	20
1,436,489	10.7	30	8.4	110	15.2	153	2.47	10.76	14.41	69	24.47	173	22.15	98	38
616,724	4.2	229	7.8	134	18.2§	99	1.26	14.55	14.23	72	5.96	287	31.94	15	20
143,385	5.2	175	4.1	279	—		1.03**	—	9.45	147	100.00	6	2.47	376	44
1,290,455	9.7	43	12.6	22	25.0	34	4.60	26.03	22.19	12	12.37	249	35.87	5	36
598,918	—		—		—		(4.73)	—	—		55.40	38	6.32	348	45
174,731	1.2	368	2.1	352	4.6	357	0.88	—	—		—		—		45
444,207	0.8	380	0.6	389	2.3	381	0.06**	(90.32)	(22.82)	339	6.25	284	(6.61)	405	44
1,418,185	9.8	39	12.4	25	17.1	122	1.59	8.90	12.49	103	25.18	169	15.33	210	34
420,754	4.3	226	5.5	229	10.4	265	2.32	(4.92)	7.04	182	(2.17)	335	17.67	168	40
1,193,750	8.0	75	7.6	140	17.1	121	2.21	23.46	18.13	34	6.55	279	29.86	23	36
396,875	—		—		—		(0.62)	—	—		40.20	89	7.86	335	26
1,263,507	13.4	19	12.1	32	16.0	138	4.02	(18.13)	14.37	70	(0.79)	325	27.32	44	26
687,973	5.2	176	5.9	206	13.0	203	1.35	17.05	6.45	186	32.26	126	17.18	175	28
552,069	6.0	138	8.1	122	21.6	55	3.80	—	5.47	202	23.91	175	11.19	290	45
227,835	3.4	267	3.1	323	11.4	247	2.44	16.94	18.06	35	(16.81)	389	19.61	137	32
—	—		—		—		N.A.	—	—		—		—		28
1,142,017	7.9	76	8.6	106	17.4	116	2.61	54.44	15.14	65	76.82	16	27.95	37	34

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
401	389	**First City Industries** (Beverly Hills, Calif.)	637,808¶	(7.0)	(9,501)	420	—	787,589	304	91,494	452
402	406	**Savannah Foods & Industries** (Savannah, Ga.)	634,682	0.9	10,399	375	(39.8)	342,926	442	112,078	448
403	428	**Media General** (Richmond, Va.)	634,627	9.7	17,107**	350	(47.9)	740,485	315	314,459	318
404	431	**Tracor** (Austin, Tex.)	632,119	12.3	18,837	342	40.9	465,515	399	212,957	377
405	420	**Warnaco** (Bridgeport, Conn.)	630,000[23]	6.6	N.A.		—	N.A.		N.A.	
406	377	**Freeport-McMoRan** (New Orleans)	629,700	(12.8)	25,700	316	(76.9)	2,358,540	141	610,744	207
407	415	**Rohr Industries** (Chula Vista, Calif.)[18]	626,124	3.1	47,318	241	0.0	502,370	386	312,731	320
408	402	**Ag Processing** (Omaha)[25]	625,404	(2.8)	N.A.		—	153,890	487	69,713	462
409	463	**Compaq Computer** (Houston)	625,243	24.1	42,897	255	[illegible]	377,681	433	183,302	393
410	452	**Ocean Spray Cranberries** (Plymouth, Mass.)[25]	624,318	17.4	N.A.		[illegible]	362,838	437	131,239	432
411	449	**Pentair** (St. Paul)	623,876	16.8	15,228	362	(24.1)	445,014	408	145,386	421
412	466	**International Flavors & Fragrances** (New York)	620,679	23.9	85,683	163	22.9	672,616	338	521,475	234
413	439	**Cameron Iron Works** (Houston)[5]	616,209	12.6	4,639	394	26.0	[illegible],428	286	361,481	297
414	430	**Roper** (Kankakee, Ill.)[18]	613,506	8.3	14,498	363	—	243,995	477	70,835	460
415	400	**Thorn Apple Valley** (Southfield, Mich.)[15]	611,010	(7.2)	(5,493)	411	—	106,908	490	28,095	476
416	●	**CalMat** (Los Angeles)	605,928	44.1	44,100	252	8.9	646,602	346	370,721	295
417	●	**Intergraph** (Huntsville, Ala.)	605,737	15.1	70,362	194	3.8	613,031	355	496,157	242
418	470	**Universal Foods** (Milwaukee)[7]	602,671	22.6	15,438	359	(11.2)	400,269	424	165,163	408
419	491	**Chesapeake** (West Point, Va.)	599,800	32.1	13,700	367	(12.7)	626,200	351	215,200	376
420	427	**Westmoreland Coal** (Philadelphia)	598,612	3.1	13,045	368	28.9	401,892	423	188,243	391
421	●	**Cray Research** (Minneapolis)	596,685	57.0	124,815	127	65.1	700,030	330	441,856	269
422	450	**NERCO** (Portland, Ore.)	594,700	11.4	57,500	212	32.5	854,300	287	306,000	323
423	●	**Kaman** (Bloomfield, Conn.)	587,820	5.7	20,256	335	6.0	315,642	451	136,802	425
424	●	**Anchor Glass Container** (Tampa, Fla.)	587,492	4.0	22,137	329	(42.4)	278,656	464	58,366	467
425	412	**H.H. Robertson** (Pittsburgh)	586,460	(4.5)	(41,843)	440	—	344,363	441	91,063	453
426	444	**Pittway** (Northbrook, Ill.)	585,738	8.2	27,608	311	(11.3)	462,829	401	282,206	335
427	475	**Leggett & Platt** (Carthage, Mo.)	585,686	22.3	34,575	283	44.1	349,412	440	183,106	394
428	447	**Bairnco** (New York)	585,055	8.9	22,530	328	2.9	416,970	419	185,656	392
429	443	**NACCO Industries** (Cleveland)[44]	584,034	7.8	33,342	289	(0.6)	1,106,608	250	181,982	398
430	●	**Georgia Gulf** (Atlanta)	583,255	(4.9)	39,123	266	7.4	264,632	470	77,956	456
431	453	**Jostens** (Minneapolis)[5]	581,911	9.8	40,315	262	6.1	322,044	448	192,947	389
432	●	**Pullman-Peabody** (Princeton, N.J.)[7]	580,504	90.2	16,174	353	14.8	379,918	430	163,195	411
433	455	**Cooper Tire & Rubber** (Findlay, Ohio)	577,517	10.5	23,018	327	24.6	367,715	435	195,151	386
434	467	**Butler Manufacturing** (Kansas City, Mo.)	576,849	15.9	3,625	396	(65.9)	265,035	469	133,178	429
435	●	**Harte-Hanks Communications** (San Antonio)	576,364	4.6	1,863	401	—	1,008,440	266	65,176	465
436	321	**Advanced Micro Devices** (Sunnyvale, Calif.)[37]	576,124	(38.1)	(36,624)	437	—	731,495	318	389,178	285
437	●	**Leslie Fay** (New York)	573,401	20.6	18,647	343	71.7	290,791	459	92,459	450
438	424	**Kellwood** (St. Louis)[19]	572,961¶	(2.7)	19,162	340	23.6	269,826	468	130,715	433
439	441	**Liquid Air** (San Francisco)	570,565	5.1	34,680	282	9.2	717,488	324	275,644	336
440	464	**Ametek** (New York)	568,493	13.1	36,584	277	4.7	511,822	383	231,067	367
441	●	**CooperVision** (Palo Alto, Calif.)[14]	560,096¶	69.2	9,000	383	(74.4)	851,426	288	220,959	373
442	436	**Handy & Harman** (New York)	558,917	0.4	(8,843)	418	—	476,201	395	114,907	444
443	456	**Hubbell** (Orange, Conn.)[45]	558,810	7.2	54,468	218	14.1	433,168	413	324,376	313
444	434	**Georgia Kraft** (Rome, Ga.)	557,428	0.1	27,578	312	(13.2)	696,977	331	410,904	277
445	495	**Standard Register** (Dayton, Ohio)	557,326	26.4	32,666	292	2.7	407,105	422	243,054	357
446	●	**Vista Chemical** (Houston)[7]	550,097	5.5	28,851	305	142.1	485,136	391	74,250	459
447	459	**Shaw Industries** (Dalton, Ga.)[5]	550,024	5.9	24,095	323	(6.9)	278,911	463	141,218	423
448	482	**C.R. Bard** (Murray Hill, N.J.)	547,994	17.7	51,194	227	22.0	422,760	417	265,919	344
449	429	**Foxboro** (Foxboro, Mass.)	543,986	(4.9)	9,272**	381	—	457,233	404	274,785	337
450	●	**Genesco** (Nashville)[18]	538,486	—	(33,929)	435	—	284,764	460	31,125	474

The definitions and concepts underlying the figures in this directory are explained on page 410. ✓ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS 401-450

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE ◆
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986 $	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
58,097	—		—		—		(1.54)	—	—		(21.31)	403	16.98	178	36
176,182	1.6	353	3.0	326	9.3	286	1.56	(40.23)	1.25	263	(21.41)	404	26.10	56	20
887,642	2.7	309	2.3	346	5.4	346	1.20**	(47.94)	0.78	268	8.38	265	18.54	156	27
398,494	3.0	291	4.1	283	8.9	292	0.97	40.58	5.14	207	(11.14)	374	22.36	94	36
—	—		—		—		N.A.	—	—		—		—		23
1,620,240	4.1	240	1.1	375	4.2	359	0.38	(76.97)	(6.88)	311	15.18	224	15.39	209	10
557,889	7.6	80	9.4	79	15.1	156	2.70	(6.41)	—		—		24.96	68	41
—	—		—		—		N.A.	—	—		—		—		20
784,294	6.9	107	11.4	39	23.4	38	1.52	56.70	—		45.28	68	—		44
—	—		—		—		N.A.	—	—		—		—		20
272,286	2.4	318	3.4	306	10.5	263	1.76	(24.38)	4.05	224	(6.73)	357	28.23	35	26
1,755,563	13.8	17	12.7	20	16.4	131	2.29	21.16	8.32	161	(4.10)	345	9.22	320	43
454,860	0.8	382	0.5	390	1.3	388	0.15	25.00	(21.00)	337	(20.71)	401	0.44	390	45
250,073	2.4	319	5.9	208	20.5	66	2.73	—	9.87	140	18.35	200	18.61	155	45
30,820	—		—		—		(1.53)	—	—		—		—		20
770,729	7.3	89	6.8	168	11.9	227	1.44	7.46	11.69	112	46.61	60	18.74	153	41
1,353,497	11.6	24	11.5	37	14.2	170	1.26	0.80	—		(53.74)	438	—		44
344,469	2.6	314	3.9	292	9.4	285	1.42	(15.14)	2.48	244	22.66	182	15.07	215	20
486,576	2.3	329	2.2	348	6.4	339	1.36	(13.56)	(0.27)	277	33.06	118	17.54	169	26
187,688	2.2	334	3.3	316	6.9	326	1.59	28.23	(13.86)	324	1.23	311	(7.60)	407	10
3,752,559	20.9	1	17.8	6	28.3	23	3.99	60.24	—		23.47	177	52.36	2	44
518,217	9.7	44	6.7	172	18.8	90	1.73	32.06	—		7.13	275	—		10
333,453	3.5	264	6.4	181	14.8	158	1.86	5.08	13.12	93	(0.33)	322	29.76	24	41
273,183	3.8	253	7.9	130	37.9	8	1.84	150.34	—		—		—		32
97,042	—		—		—		(7.36)	—	—		(47.62)	431	4.58	363	33
500,234	4.7	199	6.0	204	9.8	278	6.02	(11.21)	5.39	203	25.38	168	13.87	233	36
490,768	5.9	141	9.9	66	18.9	88	2.07	17.61	16.57	50	17.83	203	28.32	33	25
402,422	3.9	249	5.4	233	12.1	217	2.20	2.33	16.69	49	11.79	252	27.79	39	36
256,902	5.7	146	3.0	327	18.3	96	3.48	(50.10)	16.93	43	15.50	222	16.46	190	10
570,076	6.7	112	14.8	11	44.0§	4	2.41	8.98	—		—		—		28
812,380	6.9	103	12.5	24	20.9	62	1.91	8.52	13.52	87	28.58	139	26.31	52	46
325,712	2.8	303	4.3	273	9.9	275	0.40	(37.50)	—		(6.41)	355	—		40
375,327	4.0	243	6.3	187	11.8	231	2.28	23.91	6.39	187	37.78	101	26.00	59	30
152,248	0.6	384	1.4	368	2.7	374	0.71	(64.68)	(11.83)	321	(5.34)	353	7.54	338	34
—	0.3	397	0.2	402	2.9	372	N.A.	—	—		—		—		27
1,184,695	—		—		—		1.23	(46.98)	40.86	2	(52.59)	436	22.08	99	36
235,881	3.3	275	6.4	183	20.2	69	1.10	—	—		—		—		23
374,046	3.3	270	7.1	155	14.7	161	3.03	(10.18)	7.62	171	48.84	53	21.96	101	23
446,959	6.1	135	4.8	255	11.1§	250	2.42	00.00	(1.27)	290	20.07	195	5.75	355	28
689,998	6.4	116	7.2	153	15.8	142	1.66	4.40	8.86	155	(4.16)	346	18.35	160	38
372,602	1.6	355	1.1	376	4.1	361	0.41	(75.74)	—		(34.73)	422	—		38
326,994	—		—		—		(0.64)	—	—		11.26	256	18.27	163	33
996,680	9.8	41	12.6	23	16.5§	129	2.12	10.99	12.16	106	15.70	219	21.21	111	36
—	5.0	187	4.0	289	6.7	330	N.A.	—	—		—		—		26
730,286	5.9	142	8.0	126	13.4	192	2.42	0.41	29.92	4	3.70	300	33.67	10	27
507,082	5.2	173	6.0	205	36.3§	9	1.65	142.65	--		—		—		28
502,785	4.4	220	8.6	104	17.1	124	1.41	(7.24)	15.73	60	58.75	31	26.17	54	22
1,400,268	9.3	50	12.1	31	19.3	85	1.72	23.74	16.71	47	66.74	23	24.41	74	38
327,860	1.7	352	2.0	354	3.4	370	0.75**	—	(10.63)	318	(7.69)	361	3.68	369	38
75,869	—		—		—		(2.39)	—	—		(3.57)	342	(4.77)	402	31

THE FORTUNE 500 LARGEST U.S.

RANKED BY SALES

RANK		COMPANY	SALES		NET INCOME			ASSETS		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	PERCENT CHANGE	$ THOUSANDS	RANK	PERCENT CHANGE	$ THOUSANDS	RANK	$ THOUSANDS	RANK
451	484	**Philips Industries** (Dayton, Ohio)[37]	538,332	16.4	29,769	298	24.3	281,362	462	153,240	415
452	433	**Oxford Industries** (Atlanta)[15]	533,581	(4.5)	10,304	376	44.5	207,857	482	128,746	434
453	477	**Meredith** (Des Moines)[5]	533,376	12.3	47,218	242	10.5	590,921	362	304,077	324
454	442	**Riceland Foods** (Stuttgart, Ark.)[25]	532,300	(1.9)	23,800	325	—	205,300	483	131,400	430
455	•	**L.B. Foster** (Pittsburgh)	531,656	—	(55,501)	444	—	475,256	396	13,584	479
456	469	**Herman Miller** (Zeeland, Mich.)[15]	531,640	8.1	37,818	272	(7.6)	311,837	452	192,101	390
457	489	**H.B. Fuller** (St. Paul)[24]	528,483	15.4	18,922	341	26.9	291,180	458	135,479	427
458	451	**Dorsey** (Chattanooga, Tenn.)	526,754¶	(1.0)	9,430	379	(9.1)	189,617	486	74,829	458
459	448	**California & Hawaiian Sugar** (San Francisco)	526,255	(2.0)	N.A.		—	235,035	479	51,070	468
460	•	**Danaher** (Washington)	524,016¶	71.9	15,401**	360	220.9	740,729	314	65,244	464
461	435	**Carpenter Technology** (Reading, Pa.)[5]	517,033	(7.1)	7,693‡	387	(68.6)	645,733	347	311,990	321
462	423	**Phillips-Van Heusen** (New York)[33]	514,387	(12.9)	20,101	336	31.4	245,380	475	164,522	409
463	476	**United States Tobacco** (Greenwich, Conn.)	511,573	7.1	103,938	141	11.1	523,927	380	371,559	294
464	499	**American Maize-Products** (Stamford, Conn.)	509,544	17.6	9,732	377	—	372,000	434	126,343	435
465	492	**Commerce Clearing House** (Riverwoods, Ill.)	505,345	11.3	47,551	240	6.0	448,214	406	159,987	414
466	478	**Hon Industries** (Muscatine, Iowa)	503,575	6.4	29,254	301	12.4	256,332	472	136,336	426
467	•	**Kenner Parker Toys** (Beverly, Mass.)	502,776	(21.2)	24,911	321	271.8	419,215	418	199,704	383
468	493	**Coleman** (Wichita)	501,589	13.3	17,300	348	72.7	378,976	431	172,966	406
469	364	**Coleco Industries** (West Hartford, Conn.)	500,658	(35.5)	(111,249)	456	—	591,390	361	(7,664)	480
470	471	**Sun-Diamond Growers** (Stockton, Calif.)[18]	496,360	1.9	N.A.		—	258,662	471	75,672	457
471	494	**Computervision** (Bedford, Mass.)	494,672	12.1	(5,774)	412	—	425,858	416	182,871	395
472	•	**Amalgamated Sugar** (Dallas)[5]	492,843	8.8	12,290	371	(14.2)	775,434	308	125,682	437
473	472	**Stanadyne** (Windsor, Conn.)	492,763	1.8	21,131	332	(30.8)	353,681	438	216,642	374
474	•	**Diamond-Bathurst** (Malvern, Pa.)	491,806	20.7	(6,242)	413	—	291,514	457	70,218	461
475	487	**Longview Fibre** (Longview, Wash.)[14]	487,685	6.2	33,484	287	49.4	484,975	392	233,711	363
476	•	**Tambrands** (Lake Success, N.Y.)	486,564	15.7	69,130	198	19.4	363,655	436	260,303	347
477	446	**SCI Systems** (Huntsville, Ala.)[5]	470,224	(12.6)	13,792	366	0.4	271,552	467	114,469	445
478	497	**Scientific-Atlanta** (Atlanta)[5]	469,124	7.4	(9,212)	419	—	309,870	453	179,863	400
479	474	**Carlisle** (Cincinnati)	466,075	(3.3)	19,672	337	(18.5)	321,976	449	181,375	399
480	426	**Moore McCormack Resources** (Stamford, Conn.)	462,386¶	(20.8)	(121,385)‡	458	—	551,159	373	231,940	366
481	•	**Seagate Technology** (Scotts Valley, Calif.)[5]	459,836	114.2	34,536	284	—	305,079	454	208,417	380
482	483	**Wisconsin Dairies Cooperative** (Baraboo, Wis.)[37]	459,242	(1.1)	N.A.		—	118,605	489	48,605	470
483	•	**ATCOR** (Harvey, Ill.)[7]	458,377	—	(3,688)	409	—	241,939	478	90,645	454
484	•	**Clevite Industries** (Glenview, Ill.)	453,803	(2.3)	11,377‡	374	62.2	335,307	444	40,909	471
485	•	**Millipore** (Bedford, Mass.)	443,092	20.7	39,064	268	23.1	398,065	425	289,647	330
486	480	**Barnes Group** (Bristol, Conn.)	439,727	(6.6)	16,603	352	37.3	277,828	465	123,025	438
487	•	**Alberto-Culver** (Melrose Park, Ill.)[7]	439,049	19.1	8,631	385	317.9	227,742	480	116,066	442
488	•	**Noxell** (Hunt Valley, Md.)	438,784	14.8	37,101	275	14.7	244,354	476	178,259	403
489	•	**Russell** (Alexander City, Ala.)	437,520	13.5	43,282	254	46.2	351,041	439	248,347	352
490	•	**Robertshaw Controls** (Richmond, Va.)	436,254	5.7	12,752	370	(46.0)	437,510	410	165,257	407
491	490	**Trinity Industries** (Dallas)[37]	434,326	(4.6)	874	405	—	463,623	400	162,371	412
492	•	**Standard Products** (Cleveland)[5]	433,159	14.9	27,184	313	19.6	199,252	484	117,383	440
493	•	**Xidex** (Sunnyvale, Calif.)[5]	432,300	66.6	32,248	295	1.5	692,511	334	484,963	248
494	460	**Michigan Milk Prod. Assoc.** (Southfield, Mich.)[7]	431,589	(16.5)	N.A.		—	90,034	491	36,131	473
495	496	**Lancaster Colony** (Columbus, Ohio)[5]	423,413	(3.9)	2,607	400	(75.6)	250,427	474	112,706	447
496	•	**Allen Group** (Melville, N.Y.)	423,220	6.0	(8,553)	415	—	334,065	445	147,823	420
497	•	**Bassett Furniture Industries** (Bassett, Va.)[24]	421,612	3.2	19,478	338	(22.3)	277,006	466	248,974	351
498	•	**Allied Products** (Chicago)	420,846	52.4	16,173	354	349.3	390,292	428	139,132	424
499	•	**Katy Industries** (Elgin, Ill.)	420,494¶	3.5	(9,799)	421	—	304,180	455	117,373	441
500	•	**Rochester & Pittsburgh Coal** (Indiana, Pa.)	420,217	3.9	18,564	344	(0.7)	282,442	461	150,871	418
		TOTALS	1,723,419,611		64,978,752			1,560,828,239		645,296,580	

The definitions and concepts underlying the figures in this directory are explained on page 410. √ Industry code definitions appear on page 410. Footnotes appear on page 408.

INDUSTRIAL CORPORATIONS **451-500**

MARKET VALUE	NET INCOME AS PERCENT OF						EARNINGS PER SHARE				TOTAL RETURN TO INVESTORS				INDUSTRY CODE
	SALES		ASSETS		STOCKHOLDERS' EQUITY				1976-86 GROWTH RATE		1986		1976-86 GROWTH RATE		
$ THOUSANDS	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	1986/$	PERCENT CHANGE	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK	
577,004	5.5	157	10.6	56	19.4	79	2.15	15.59	—		7.14	274	25.43	61	34
176,854	1.9	345	5.0	251	8.0	306	0.93	45.31	(1.16)	287	(8.38)	363	22.43	93	23
666,025	8.9	54	8.0	128	15.5	149	4.98	9.93	12.50	102	(1.60)	330	29.63	26	27
—	4.5	215	11.6	35	18.1	101	N.A.	—	—		—		—		20
26,714	—		—		—		(5.74)	—	—		(52.28)	435	—		34
608,786	7.1	95	12.1	30	19.7	75	1.14	(30.06)	16.11	56	(12.84)	379	34.58	7	25
318,570	3.6	259	6.5	178	14.0	176	2.00	24.22	13.18	92	42.50	79	23.07	83	28
159,324	1.8	349	5.0	250	12.4§	209	1.32	(17.76)	1.98	254	13.79	238	18.47	157	30
—	—		—		—		N.A.	—	—		—		—		20
252,347	2.9	293	2.1	350	23.6	37	1.51**	14.39	—		57.14	35	23.49	80	30
352,746	1.5	361	1.2	374	2.5	378	0.86‡	(68.95)	(8.32)	315	(3.72)	344	11.51	280	33
261,088	3.9	247	8.2	119	12.2	214	3.18	30.33	16.76	46	30.02	133	27.02	48	23
1,492,988	20.3	2	19.8	2	28.0	24	1.86	13.41	17.37	39	34.09	115	24.09	77	21
114,670	1.9	347	2.6	336	7.7	311	1.82	—	2.27	248	45.87	65	11.93	270	20
1,152,000	9.4	48	10.6	54	29.7	19	2.64	6.02	18.84	28	26.40	158	28.11	36	27
455,602	5.8	144	11.4	38	21.5	58	2.85	17.28	14.91	66	23.45	178	23.42	82	25
290,696	5.0	186	5.9	207	12.5	208	1.90	—	—		16.67	208	—		47
264,140	3.5	263	4.6	265	10.0	272	2.48	69.86	2.43	245	1.63	310	11.53	279	45
288,266	—		—		—		(6.52)	—	—		(47.66)	432	12.30	260	47
—	—		—		—		N.A.	—	—		—		—		20
570,479	—		—		—		(0.20)	—	—		5.94	288	34.56	8	44
—	2.5	317	1.6	362	9.8	279	1.88	(14.16)	13.52	86	—		—		20
312,730	4.3	225	6.0	202	9.8	281	2.20	(30.82)	5.28	205	21.73	189	16.20	194	34
124,590	—		—		—		(0.82)	—	—		(53.60)	437	—		32
749,319	6.9	106	6.9	164	14.3	167	3.02	49.50	(16.88)	330	41.91	83	13.39	244	26
1,452,013	14.2	11	19.0	3	26.6	28	3.12	19.31	7.89	167	26.49	157	19.07	146	26
364,467	2.9	295	5.1	248	12.1	220	1.00	—	28.73	6	16.53	211	29.15	28	44
387,944	—		—		—		(0.39)	—	—		(3.22)	340	13.53	240	36
314,089	4.2	230	6.1	196	10.9	256	2.16	(17.24)	12.98	95	(9.95)	371	27.33	43	30
205,934	—		—		—		(13.80)‡	—	—		(17.18)	390	3.51	371	32
1,560,415	7.5	81	11.3	40	16.6	128	0.72	3,500.00	—		163.79	2	—		36
—	—		—		—		N.A.	—	—		—		—		20
81,628	—		—		—		(0.65)	—	—		(44.03)	427	—		36
54,004	2.5	316	3.4	308	19.6§	77	1.73‡	—	—		—		—		40
1,177,758	8.8	55	9.8	68	13.5	191	1.40	21.74	10.84	126	39.71	92	12.02	267	30
258,422	3.8	252	6.0	201	13.5	190	2.57	53.89	4.26	220	14.45	230	13.79	236	34
285,195	2.0	342	3.8	295	7.4	314	0.68	191.43	16.32	53	25.16	170	26.20	53	43
1,126,430	8.5	64	15.2	9	20.8	63	1.85	13.50	16.19	54	43.92	73	27.72	40	43
763,544	9.9	37	12.3	27	17.4	114	1.08	45.95	19.20	23	(7.32)	360	30.75	20	22
—	2.9	297	2.9	329	7.7	310	N.A.	—	—		119.20	3	24.80	72	38
393,749	0.2	401	0.2	401	0.5	394	0.05	—	(24.87)	341	12.48	247	15.99	200	37
468,461	6.3	123	13.6	16	23.2	40	2.92	20.00	14.35	71	92.00	10	32.48	14	30
616,146	7.5	83	4.7	263	6.7	331	0.75	(7.41)	—		(19.01)	395	—		44
—	—		—		—		N.A.	—	—		—		—		20
266,511	0.6	385	1.0	377	2.3	380	0.26	(75.38)	(10.67)	319	38.52	100	17.16	177	30
149,306	—		—		—		(1.23)	—	—		(24.05)	409	12.84	254	40
373,482	4.6	206	7.0	158	7.8	308	2.32	(22.92)	2.52	243	(0.73)	323	16.15	196	25
201,132	3.8	250	4.1	277	11.6	238	3.36	0.90	—		40.21	88	19.00	148	45
93,225	—		—		—		(1.90)	—	—		(15.75)	386	5.78	354	45
180,701	4.4	218	6.6	175	12.3	212	7.78	(0.02)	7.35	176	—		—		10
1,399,235,620															

WHO DID BEST AND WORST AMONG THE 500

TOTAL RETURN TO INVESTORS, 1986

THE TEN HIGHEST

	SALES RANK	
Jefferson Smurfit	294	**187.70**
Seagate Technology	481	**163.79**
Robertshaw Controls	490	**119.20**
Masco Industries	379	**111.63**
Owens-Illinois	108	**105.82**
Storage Technology	386	**100.00**
Tyson Foods	226	**98.51**
Fieldcrest Cannon	284	**95.44**
Lear Siegler	156	**94.14**
Standard Products	492	**92.0**

THE FIVE LOWEST

Colt Industries	213	**−83.68%**
NVF	279	**−80.00**
LTV	49	**−75.93**
Manville	188	**−68.75**
Owens-Corning Fiberglas	107	**−62.66**

THE INDUSTRY MEDIANS

Tobacco	**48.74%**
Rubber products	**38.15**
Food	**36.50**
Textiles	**35.96**
Forest products	**30.88**
Pharmaceuticals	**27.90**
Scientific and photo equip.	**22.87**
Chemicals	**21.84**
Metal products	**21.73**
Apparel	**21.51**
Furniture	**17.83**
Soaps, cosmetics	**16.67**
Beverages	**16.37**
Computers (incl. office equip.)	**14.64**
Publishing, printing	**14.47**
Building materials	**14.07**
Transportation equipment	**9.32**
Industrial and farm equipment	**7.33**
Electronics	**6.55**
Motor vehicles and parts	**5.16**
Petroleum refining	**4.00**
Aerospace	**−.04**
Mining, crude-oil production	**−.51**
Toys, sporting goods	**−1.11**
Metals	**−9.50**
All Industries	***15.50***

TOTAL RETURN TO INVESTORS, 1976-86 AVG.

THE TEN HIGHEST

	SALES RANK	
Tyson Foods	226	**58.27%**
Cray Research	421	**52.36**
Hasbro	243	**48.19**
ConAgra	59	**41.18**
Telex	387	**35.87**
International Controls	329	**35.86**
Herman Miller	456	**34.58**
Computervision	471	**34.56**
VF	223	**34.10**
Standard Register	445	**33.67**

THE FIVE LOWEST

Manville	188	**−21.71%**
NVF	279	**−19.75**
LTV	49	**−18.25**
Allis-Chalmers	363	**−18.24**
Navistar International	118	**−15.29**

THE INDUSTRY MEDIANS

Publishing, printing	**24.62%**
Beverages	**23.64**
Furniture	**23.42**
Apparel	**22.20**
Tobacco	**21.78**
Food	**20.35**
Rubber products	**17.82**
Metal products	**17.53**
Aerospace	**17.30**
Textiles	**17.16**
Transportation equipment	**16.95**
Forest products	**16.23**
Pharmaceuticals	**16.05**
Toys, sporting goods	**15.72**
Electronics	**13.73**
Scientific and photo equip.	**13.20**
Motor vehicles and parts	**13.12**
Petroleum refining	**12.31**
Computers (incl. office equip.)	**12.15**
Chemicals	**11.56**
Building materials	**10.79**
Soaps, cosmetics	**10.60**
Mining, crude-oil production	**8.50**
Industrial and farm equipment	**7.44**
Metals	**4.58**
All Industries	***15.55***

RETURN ON SALES

THE TEN HIGHEST

	SALES RANK	
Cray Research	421	**20.9%**
United States Tobacco	463	**20.3**
Merck	71	**16.4**
Dow Jones	272	**16.2**
American Home Products	74	**15.8**
Squibb	153	**15.7**
Eli Lilly	101	**15.0**
Rorer Group	341	**14.9**
Pfizer	84	**14.7**
Tribune	176	**14.4**

THE INDUSTRY MEDIANS

	1986	1985
Pharmaceuticals	**13.1%**	**10.4%**
Publishing, printing	**8.5**	**8.1**
Beverages	**7.7**	**6.4**
Tobacco	**7.0**	**9.7**
Furniture	**5.8**	**5.3**
Computers (incl. office equip.)	**5.6**	**4.3**
Soaps, cosmetics	**5.5**	**3.8**
Chemicals	**5.2**	**3.4**
Forest products	**4.9**	**3.8**
Scientific and photo equip.	**4.7**	**5.1**
Metal products	**4.4**	**4.6**
Aerospace	**4.1**	**4.2**
Mining, crude-oil production	**3.8**	**4.8**
Building materials	**3.6**	**4.0**
Electronics	**3.4**	**4.2**
Apparel	**3.3**	**2.7**
Motor vehicles and parts	**3.0**	**4.4**
Textiles	**3.0**	**1.8**
Food	**2.8**	**3.0**
Petroleum refining	**2.4**	**2.7**
Rubber products	**2.3**	**2.4**
Transportation equipment	**1.7**	**4.0**
Metals	**1.5**	**1.9**
Industrial and farm equipment	**1.2**	**2.3**
Toys, sporting goods	**.1**	**7.8**
All Industries	***4.1***	***3.9***

RETURN ON ASSETS

THE TEN HIGHEST

	SALES RANK	
Liz Claiborne	350	**25.7%**
United States Tobacco	463	**19.8**
Tambrands	476	**19.0**
American Home Products	74	**18.7**
Deluxe Check Printers	334	**18.3**
Cray Research	421	**17.8**
Squibb	153	**16.5**
Kellogg	120	**15.3**
Noxell	488	**15.2**
Dow Jones	272	**14.8**

THE INDUSTRY MEDIANS

	1986	1985
Pharmaceuticals	12.2%	10.0%
Furniture	9.9	10.0
Publishing, printing	8.7	9.3
Soaps, cosmetics	8.1	5.3
Tobacco	7.6	7.9
Beverages	7.6	8.7
Computers (incl. office equip.)	6.4	6.2
Food	6.4	6.0
Apparel	6.4	5.5
Metal products	6.0	5.3
Chemicals	5.8	4.2
Aerospace	5.7	6.1
Scientific and photo equip.	5.1	7.0
Forest products	4.8	4.2
Motor vehicles and parts	4.3	6.9
Building materials	4.1	4.4
Electronics	4.1	4.5
Textiles	3.8	2.4
Rubber products	3.3	4.1
Transportation equipment	3.2	6.8
Metals	3.0	1.8
Mining, crude-oil production	2.7	3.1
Petroleum refining	2.0	3.0
Industrial and farm equipment	1.9	2.8
Toys, sporting goods	.1	11.3
All Industries	5.2	5.2

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
A.H. Robins	361	**166.8%**
National Gypsum	207	**60.5**
Union Carbide	42	**49.4**
Georgia Gulf	430	**44.0**
SmithKline Beckman	99	**40.2**
Ralston Purina	65	**38.9**
USG	136	**38.6**
Anchor Glass Container	424	**37.9**
Vista Chemical	446	**36.3**
W.R. Grace	56	**36.1**

THE INDUSTRY MEDIANS

	1986	1985
Pharmaceuticals	23.6%	15.6%
Tobacco	22.1	22.8
Furniture	18.9	18.6
Beverages	18.8	17.5
Publishing, printing	18.7	18.7
Soaps, cosmetics	17.1	12.1
Food	15.8	15.0
Metal products	13.3	12.7
Aerospace	12.4	13.1
Apparel	12.2	12.0
Chemicals	12.0	8.3
Forest products	11.8	8.3
Building materials	11.5	10.0
Computers (incl. office equip.)	10.8	11.0
Rubber products	10.8	9.3
Scientific and photo equip.	10.3	13.1
Motor vehicles and parts	10.1	13.7
Electronics	9.8	10.1
Textiles	8.1	5.6
Mining, crude-oil production	7.7	11.0
Petroleum refining	5.8	9.9
Transportation equipment	5.2	13.2
Metals	5.1	5.0
Industrial and farm equipment	3.7	5.8
Toys, sporting goods	.3	31.7
All Industries	11.6	11.6

CHANGES IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Chicago Pacific	317	**963.2%**
International Controls	329	**536.4**
Maytag	194	**168.9**
Baxter Travenol Laboratories	63	**139.2**
Seagate Technology	481	**114.2**
Pullman-Peabody	432	**90.2**
Texas Industries	398	**88.6**
Winn Enterprises	295	**86.4**
Fieldcrest Cannon	284	**84.8**
Danaher	459	**71.9**

THE TEN BIGGEST DECREASES

Tosco	362	**48.4%**
Amerada Hess	92	**47.5**
Anderson Clayton	292	**42.1**
Chevron	10	**41.7**
Cabot	249	**40.9**
Pacific Resources	353	**40.5**
Murphy Oil	247	**40.2**
Farmland Industries	142	**38.5**
Advanced Micro Devices	436	**38.1**
ITT	41	**37.9**

THE INDUSTRY MEDIANS

	INCREASES
Tobacco	18.9%
Metal products	16.2
Pharmaceuticals	12.6
Computers (incl. office equip.)	12.1
Textiles	11.1
Publishing, printing	10.5
Soaps, cosmetics	9.0
Aerospace	9.0
Forest products	8.6
Scientific and photo equip.	8.6
Electronics	7.3
Beverages	6.9
Furniture	6.4
Food	4.3
Rubber products	4.2
Motor vehicles and parts	4.0
Building materials	3.1
Industrial and farm equipment	2.2
Chemicals	2.1
	DECREASES
Petroleum refining	24.6%
Toys, sporting goods	7.7
Transportation equipment	4.6
Apparel	3.4
Metals	2.5
Mining, crude-oil production	2.0

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*

	SALES RANK	
Firestone Tire & Rubber	102	**2733.3%**
Dow Chemical	27	**1162.1**
Stone Container	175	**837.4**
American Standard	121	**754.7**
York International	387	**584.8**
American Hoechst	210	**561.2**
Dennison Manufacturing	382	**351.0**
Burlington Industries	140	**349.6**
Allied Products	498	**349.2**
Alberto-Culver	487	**317.9**

THE TEN BIGGEST DECREASES*

Minstar	269	**97.6%**
Air Products & Chemicals	179	**96.7**
Federal-Mogul	320	**93.1**
Harnischfeger Industries	346	**91.9**
American Tel. & Tel.	7	**91.1**
Gillette	137	**90.1**
Owens-Corning Fiberglas	107	**88.1**
Harcourt Brace Jovanovich	307	**85.2**
Northrop	64	**80.8**
Dayco	326	**79.4**

THE INDUSTRY MEDIANS

	INCREASES
Soaps, cosmetics	**42.6%**
Metals	**39.2**
Textiles	**33.1**
Mining, crude-oil production	**30.7**
Apparel	**29.7**
Chemicals	**26.9**
Computers (incl. office equip.)	**25.6**
Pharmaceuticals	**20.3**
Rubber products	**19.6**
Building materials	**19.5**
Forest products	**19.4**
Industrial and farm equipment	**18.6**
Food	**14.2**
Beverages	**11.4**
Motor vehicles and parts	**11.0**
Metal products	**10.8**
Publishing, printing	**9.1**
Tobacco	**8.7**
Electronics	**6.1**
Scientific and photo equipment	**4.7**
	DECREASES
Toys, sporting goods	**97.6%**
Petroleum refining	**45.7**
Transportation equipment	**25.0**
Furniture	**7.2**
Aerospace	**4.3**

*Listings exclude money losers.

SALES PER DOLLAR OF STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	SALES RANK	
Swift Independent	141	**$162.20**
Wilson Foods	229	**39.57**
L.B. Foster	455	**39.14**
Smithfield Foods	336	**35.57**
Fairchild Industries	309	**33.50**
Allegheny International	186	**29.09**
Thorn Apple Valley	415	**21.75**
National Gypsum	207	**18.51**
Genesco	450	**17.30**
Lever Brothers	155	**16.40**

THE FIVE LOWEST

Wheeling-Pittsburgh Steel	322	**$−4.31**
FMC	131	**−5.93**
Navistar International	118	**−27.23**
Storage Technology	386	**−38.54**
Coleco Industries	469	**−65.33**

THE INDUSTRY MEDIANS

Food	**$4.86**
Aerospace	**4.01**
Motor vehicles and parts	**3.48**
Transportation equipment	**3.45**
Soaps, cosmetics	**3.45**
Rubber products	**3.38**
Textiles	**3.24**
Apparel	**3.21**
Furniture	**3.20**
Petroleum refining	**2.93**
Metal products	**2.93**
Electronics	**2.77**
Tobacco	**2.62**
Industrial and farm equipment	**2.59**
Toys, sporting goods	**2.52**
Building materials	**2.30**
Forest products	**2.30**
Chemicals	**2.29**
Beverages	**2.26**
Metals	**2.26**
Publishing, printing	**2.21**
Scientific and photo equipment	**1.98**
Computers (incl. office equip.)	**1.95**
Pharmaceuticals	**1.95**
Mining, crude-oil production	**1.85**
All Industries	**2.79**

SALES PER EMPLOYEE

THE TEN HIGHEST

	SALES RANK	
National Coop. Refinery	378	**$1,247,166**
Ag Processing	408	**992,705**
Louisiana Land & Exploration	348	**977,778**
Pacific Resources	353	**927,191**
Valero Energy	192	**903,886**
Tosco	362	**866,976**
Union Texas Petrol. Hold.	258	**711,444**
Exxon	2	**685,176**
Texaco	8	**608,200**
Michigan Milk Prod. Assoc.	494	**591,218**

THE FIVE LOWEST

Russell	489	**$43,578**
PepsiCo	34	**43,315**
Advanced Micro Devices	436	**42,087**
General Instrument	343	**41,046**
Kellwood	438	**38,197**

THE INDUSTRY MEDIANS

Petroleum refining	**$405,862**
Mining, crude-oil production	**190,158**
Food	**167,347**
Chemicals	**164,452**
Beverages	**151,405**
Soaps, cosmetics	**147,278**
Tobacco	**142,214**
Metals	**133,318**
Toys, sporting goods	**131,752**
Forest products	**131,118**
Building materials	**125,099**
Transportation equipment	**113,245**
Pharmaceuticals	**111,440**
Motor vehicles and parts	**105,546**
Publishing, printing	**95,093**
Metal products	**94,851**
Rubber products	**94,176**
Computers (incl. office equip.)	**93,976**
Industrial and farm equipment	**92,102**
Aerospace	**88,731**
Scientific and photo equipment	**84,704**
Electronics	**81,596**
Textiles	**73,104**
Furniture	**68,904**
Apparel	**54,581**
All Industries	**110,522**

THE MONEY LOSERS

	SALES RANK	LOSS
LTV	49	$3,251,600,000*
USX	22	1,833,000,000
Hughes Tool	355	475,849,000
Armco	129	472,000,000
Honeywell	52	398,100,000
Standard Oil	35	345,000,000
NL Industries	252	324,195,000
Kerr-McGee	152	292,000,000
Baker International	220	272,987,000
Control Data	119	264,500,000*
Wheeling-Pittsburgh Steel	322	250,923,000*
Deere	111	229,272,000
Amerada Hess	92	219,443,000*
Int'l. Minerals & Chemical	205	217,000,000
Murphy Oil	247	194,750,000
Intel	256	173,165,000
Allegheny International	186	164,000,000*
Bethlehem Steel	89	152,700,000*
IC Industries	85	136,700,000
Moore McCormack	480	121,385,000
Diamond Shamrock	130	115,600,000*
Coleco Industries	469	111,249,000
Cummins Engine	160	107,331,000
Rexnord	281	103,733,000
Gould	235	101,800,000*
Valero Energy	192	99,888,000
Premark International	183	98,300,000
National Semiconductor	227	91,500,000
American Motors	113	91,319,000*
Joy Manufacturing	388	83,884,000
General Instrument	343	66,543,000*
Clark Equipment	318	60,598,000*
Union Texas Petrol. Hold.	258	57,488,000
L.B. Foster	455	55,501,000
General Dynamics	36	52,500,000
Unisys	46	43,400,000
Household Manufacturing	327	42,833,000
H.H. Robertson	425	41,843,000*
Tenneco	21	39,000,000
Armstrong Rubber	357	37,608,000
Advanced Micro Devices	436	36,624,000
United Merchants & Mfrs.	356	35,340,000*
Genesco	450	33,929,000
Norton	277	33,100,000*
Kaiser Aluminum & Chem.	165	32,700,000*
Mack Trucks	203	30,569,000*
Data General	255	28,980,000
American Petrofina	182	24,569,000*
Wilson Foods	229	23,514,000*
Louisiana Land	348	20,600,000
Crown Central Petroleum	293	20,231,000
Lever Brothers	155	18,584,000*
Varian Associates	325	14,870,000
Emhart	170	10,200,000
Zenith Electronics	191	10,000,000*
Fairchild Industries	309	9,962,000*
Katy Industries	499	9,799,000*
First City Industries	401	9,501,000*
Scientific-Atlanta	478	9,212,000
Handy & Harman	442	8,843,000
DWG	268	8,611,000
Allis-Chalmers	363	8,581,000*
Allen Group	496	8,553,000
International Controls	329	6,879,000
Diamond-Bathurst	474	6,242,000
Computervision	471	5,774,000*
Thorn Apple Valley	415	5,493,000*
Big Three Industries	399	4,505,000
ATCOR	483	3,688,000
Southwest Forest Ind.	394	1,700,000*
Mattel	289	951,000

*Also lost money in 1985.

ARRIVALS AND DEPARTURES

NEWCOMERS TO THE 500

	SALES RANK
Allen Group	496
Amalgamated Sugar	472
Anchor Glass Container	424
ATCOR	483
Bassett Furniture Industries	497
Bayer USA	117
CalMat	416
Chicago Pacific	317
CooperVision	441
Cray Research	421
Cyprus Minerals	354
Danaher	460
Diamond-Bathurst	474
Georgia Gulf	430
HIMONT	304
Intergraph	417
International Controls	329
Kaman	423
Kenner Parker Toys	467
Leslie Fay	437
Millipore	485
Noxell	488
Premark International	183
Rochester & Pittsburgh Coal	500
Russell	489
Seagate Technology	481
Standard Products	492
Tambrands	476
Texas Industries	398
Union Texas	258
Vista Chemical	446
Xidex	493
York International	389

RETURNED TO THE 500*

Alberto-Culver (1970: 498)	487
Allied Products (1974: 475)	498
Clevite Industries (1968: 407)	484
Foster (L.B.) (1981: 458)	455
Foster Wheeler (1982: 215)	257
Genesco (1983: 394)	450
Harte-Hanks Communications (1983: 485)	435
Katy Industries (1984: 492)	499
Pullman-Peabody (1975: 102)	432
Robertshaw Controls (1961: 484)	490

DISPLACED FROM THE 500

	1985 SALES RANK
American Bakeries [1]	485
American Can [2]	140
Ampco-Pittsburgh	486
Amsted Industries [1]	384
Beatrice [1]	26
CBI Industries [2]	228
Capital Cities Communications [2]	306
Ceco Industries [1]	413
Cluett Peabody [3]	314
Crown Zellerbach [4]	128
Datapoint	458
Dataproducts	479
Easco [1]	445
Ex-Cell-O [5]	287
General Foods [6]	38
Gifford-Hill [7]	481
Guardian Industries [1]	438
Hammermill Paper [8]	199
Harris Graphics [9]	468
Idle Wild Foods [1]	325
Levi Strauss [1]	148
MEI [10]	358
Magic Chef [11]	297
Manhattan Industries	457
Marmon Group [1]	226
Midland-Ross [1]	369
Miles Laboratories [12]	279
Mobay [12]	227
Ogden [2]	197
Pierce (S.S.) [13]	498
Revere Copper & Brass [1]	488
Richardson-Vicks [14]	271
SCM [15]	172
Sanders Associates [16]	341
Scott & Fetzer [17]	381
Smith International	387
Sperry [18]	63
Sybron [1]	454
Texas Oil & Gas [19]	220
Todd Shipyards	462
Uniroyal [20]	175
White Consolidated Industries [21]	186
Winnebago Industries	500

* Figures in parentheses indicate year and sales rank the last time the company was listed.

[1] Figures no longer made public.

[2] No longer classified as an industrial.

[3] Acquired by West Point-Pepperell (rank: 195) January 15, 1986.

[4] Acquired by James River Corp. of Virginia (rank: 149) May 5, 1986.

[5] Acquired by Textron (rank: 69) September 17, 1986.

[6] Acquired by Philip Morris (rank: 12) November 1, 1985.

[7] Acquired by Beazer Holdings PLC October 8, 1986.

[8] Acquired by International Paper (rank: 66) September 7, 1986.

[9] Acquired by AM International (rank: 390) June 24, 1986.

[10] Acquired by PepsiCo (rank: 34) May 30, 1986.

[11] Acquired by Maytag (rank: 194) May 30, 1986.

[12] Consolidated into Bayer USA (rank: 117) July 1, 1986.

[13] Name changed to Seneca Foods January 1, 1987.

[14] Acquired by Procter & Gamble (rank: 18) November 13, 1985.

[15] Acquired by Hanson Industries North America (rank: 97) March 31, 1986.

[16] Acquired by Lockheed (rank: 30) August 3, 1986.

[17] Acquired by Berkshire Hathaway (1985 Service 500 rank: S81) January 6, 1986.

[18] Merged with Burroughs to form Unisys (rank: 46) Sept. 16, 1986.

[19] Acquired by USX (rank: 22) February 11, 1986.

[20] Plan of liquidation adopted December 2, 1986.

[21] Acquired by Electrolux (1985 International 500 rank: 108) March 31, 1986.

THE 500 BY INDUSTRY ranked by 11 measures

RANKED WITHIN INDUSTRY

COMPANY 500 RANK	SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	SALES %	RANK	ASSETS %	RANK	EQUITY %	RANK	10-year growth rate %	RANK	10-year growth rate %	RANK	1986 %	RANK		RANK
AEROSPACE 18 COMPANIES																						
Boeing 16	**16,341**	1	**20**	3	**665**	1	**17**	1	**4**	9	**6**	9	**14**	7	**20**	2	**27**	3	**(0)**	9	**118,500**	4
United Technologies 17	**15,669**	2	**(1)**	17	**73**	11	**(77)**	14	**0**	16	**1**	16	**2**	15	**(20)**	15	**14**	15	**8**	5	**193,500**	1
McDonnell Douglas 23	**12,661**	3	**10**	8	**278**	5	**(20)**	11	**2**	14	**4**	13	**10**	12	**9**	7	**15**	12	**(2)**	13	**105,696**	5
Rockwell International 24	**12,296**	4	**8**	10	**611**	2	**3**	5	**5**	6	**8**	3	**19**	3	**16**	3	**25**	5	**30**	3	**121,194**	3
Allied-Signal 25	**11,794**	5	**29**	2	**605**	3	—		**5**	4	**5**	10	**16**	4	**2**	12	**10**	16	**(1)**	12	**137,200**	2
Lockheed 30	**10,273**	6	**8**	12	**408**	4	**2**	6	**4**	10	**7**	6	**22**	2	**20**	1	**33**	1	**4**	6	**96,900**	7
General Dynamics 36	**9,211**	7	**10**	9	**(53)**	18	—		—		—		—		—		**22**	7	**(0)**	10	**105,400**	6
Northrop 64	**5,608**	8	**11**	7	**41**	15	**(81)**	15	**1**	15	**2**	15	**5**	14	**(1)**	14	**21**	8	**(9)**	15	**46,800**	10
Textron 69	**5,226**	9	**5**	15	**239**	6	**(5)**	9	**5**	7	**4**	11	**13**	9	**6**	10	**15**	11	**33**	2	**72,000**	8
Martin Marietta 77	**4,753**	10	**8**	11	**202**	7	**(19)**	10	**4**	8	**8**	2	**24**	1	**14**	4	**23**	6	**11**	4	**67,000**	9
Grumman 114	**3,440**	11	**13**	5	**79**	10	**(3)**	8	**2**	13	**4**	12	**10**	11	**3**	11	**16**	10	**(20)**	16	**33,400**	11
Parker Hannifin 201	**1,730**	12	**19**	4	**88**	9	**5**	4	**5**	5	**7**	5	**13**	8	**7**	9	**14**	13	**3**	7	**26,564**	12
Colt Industries 213	**1,616**	13	**(12)**	18	**89**	8	**(35)**	12	**6**	3	**8**	4	—		**7**	8	**(1)**	18	**(84)**	17	**18,400**	13
Sundstrand 236	**1,434**	14	**12**	6	**45**	13	**(39)**	13	**3**	12	**3**	14	**8**	13	**1**	13	**8**	17	**1**	8	**16,000**	14
Fairchild Industries 309	**967**	15	**5**	14	**(10)**	17	—		—		—		—		—		**14**	14	**(4)**	14	**11,230**	15
Rohr Industries 407	**626**	16	**3**	16	**47**	12	**0**	7	**8**	1	**9**	1	**15**	5	—		**25**	4	—		**8,377**	16
CalMat 416	**606**	17	**44**	1	**44**	14	**9**	2	**7**	2	**7**	7	**12**	10	**12**	6	**19**	9	**47**	1	**3,145**	18
Kaman 423	**588**	18	**6**	13	**20**	16	**6**	3	**3**	11	**6**	8	**15**	6	**13**	5	**30**	2	**(0)**	11	**6,333**	17
APPAREL 10 COMPANIES																						
INTERCO 154	**2,511**	1	**(4)**	7	**92**	2	**28**	5	**4**	4	**6**	6	**8**	6	**2**	5	**10**	6	**8**	5	**46,000**	1
VF 223	**1,545**	2	**4**	4	**129**	1	**(7)**	7	**8**	2	**7**	4	**16**	3	**22**	1	**34**	1	**22**	4	**34,339**	2
Farley/Northwest Industries 259	**1,246**	3	**(19)**	10	**12**	8	—		**1**	9	**1**	9	—		—		—		—		**16,800**	4
Hartmarx 288	**1,063**	4	**(4)**	6	**25**	4	**(42)**	8	**2**	7	**4**	8	**7**	8	**5**	4	**18**	5	**6**	6	**22,000**	3
Claiborne (Liz) 350	**813**	5	**46**	1	**86**	3	**42**	3	**11**	1	**26**	1	**35**	1	—		—		**77**	1	**3,000**	9
Warnaco 405	**630**	6	**7**	3	—		—		—		—		—		—		—		—		—	
Leslie Fay 437	**573**	7	**21**	2	**19**	7	**72**	1	**3**	6	**6**	5	**20**	2	—		—		—		**4,100**	8
Kellwood 438	**573**	8	**(3)**	5	**19**	6	**24**	6	**3**	5	**7**	3	**15**	4	**8**	3	**22**	4	**49**	2	**15,000**	5
Oxford Industries 452	**534**	9	**(4)**	8	**10**	9	**44**	2	**2**	8	**5**	7	**8**	7	**(1)**	6	**22**	3	**(8)**	7	**12,035**	6
Phillips-Van Heusen 462	**514**	10	**(13)**	9	**20**	5	**31**	4	**4**	3	**8**	2	**12**	5	**17**	2	**27**	2	**30**	3	**8,041**	7
BEVERAGES 8 COMPANIES																						
PepsiCo 34	**9,291**	1	**10**	2	**458**	3	**(16)**	7	**5**	6	**6**	6	**22**	3	**11**	6	**16**	6	**10**	7	**214,495**	1
Coca-Cola 38	**8,669**	2	**7**	5	**934**	1	**29**	2	**11**	3	**11**	2	**27**	1	**12**	5	**17**	5	**39**	1	**28,030**	3
Anheuser-Busch 43	**7,677**	3	**10**	1	**518**	2	**17**	3	**7**	5	**9**	3	**21**	4	**23**	2	**25**	3	**26**	2	**41,805**	2
Seagram (Joseph E.) & Sons 197	**1,810**	4	**7**	3	**247**	4	**(21)**	8	**14**	1	**4**	7	**7**	7	—		—		—		**9,600**	6
Coors (Adolph) 246	**1,315**	5	**3**	7	**59**	7	**11**	5	**5**	7	**4**	8	**6**	8	**(3)**	7	**4**	7	**13**	6	**9,820**	5
Heileman (G.) Brewing 267	**1,174**	6	**0**	8	**48**	8	**12**	4	**4**	8	**7**	5	**14**	6	**15**	4	**29**	1	**19**	3	**7,500**	7
General Cinema 297	**1,012**	7	**5**	6	**126**	5	**43**	1	**12**	2	**12**	1	**25**	2	**25**	1	**24**	4	**16**	5	**12,500**	4
Brown-Forman 299	**995**	8	**7**	4	**86**	6	**6**	6	**9**	4	**8**	4	**16**	5	**20**	3	**26**	2	**16**	4	**6,800**	8
BUILDING MATERIALS 18 COMPANIES																						
PPG Industries 78	**4,687**	1	**8**	6	**316**	1	**5**	10	**7**	4	**7**	6	**16**	5	**8**	5	**20**	2	**47**	3	**36,500**	2
Owens-Corning Fiberglas 107	**3,644**	2	**10**	4	**16**	14	**(88)**	14	**0**	15	**1**	15	—		**(15)**	13	**(5)**	13	**(63)**	15	**27,700**	3
Owens-Illinois 108	**3,642**	3	**(1)**	15	**179**	3	**15**	8	**5**	7	**5**	8	**11**	11	**0**	10	**20**	3	**106**	1	**45,166**	1
USG 136	**2,870**	4	**14**	3	**226**	2	**1**	11	**8**	3	**11**	1	**39**	2	**21**	1	**26**	1	**53**	2	**21,700**	5
Walter (Jim) 159	**2,320**	5	**3**	10	**139**	5	**24**	7	**6**	5	**5**	9	**12**	8	**6**	6	**12**	6	**39**	4	**16,600**	7
Manville 188	**1,920**	6	**2**	11	**81**	7	—		**4**	8	**3**	11	**8**	12	**(1)**	11	**(22)**	14	**(69)**	16	**19,000**	6
Corning Glass Works 193	**1,856**	7	**10**	5	**177**	4	**33**	5	**10**	2	**8**	4	**13**	6	**5**	7	**8**	10	**(9)**	11	**25,100**	4
National Gypsum 207	**1,694**	8	**(2)**	16	**55**	9	**(37)**	12	**3**	11	**3**	10	**60**	1	**19**	2	—		—		**9,544**	11
CertainTeed 275	**1,114**	9	**0**	14	**57**	8	**7**	9	**5**	6	**7**	5	**11**	9	**2**	8	**7**	11	**22**	5	**7,074**	13
Norton 277	**1,107**	10	**(7)**	17	**(33)**	17	—		—		—		—		—		**12**	5	**1**	10	**15,200**	8
Brockway 286	**1,066**	11	**3**	9	**30**	10	**69**	4	**3**	12	**6**	7	**12**	7	**1**	9	**11**	8	**22**	6	**12,000**	9
Lafarge 311	**964**	12	**2**	12	**26**	11	**84**	3	**3**	13	**3**	13	**5**	13	—		—		**14**	8	**5,800**	14
Lone Star Industries 333	**883**	13	**1**	13	**117**	6	**101**	2	**13**	1	**8**	2	**17**	4	**11**	4	**11**	7	**14**	9	**7,254**	12
Anchor Hocking 367	**758**	14	**5**	7	**7**	15	**175**	1	**1**	14	**1**	14	**3**	14	**(14)**	12	**10**	9	**16**	7	**9,900**	10
Texas Industries 398	**648**	15	**89**	1	**22**	13	**26**	6	**3**	10	**3**	12	**11**	10	**18**	3	**20**	4	**(17)**	12	**3,800**	17

COMPANY 500 RANK	RANKED WITHIN INDUSTRY SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	SALES %	RANK	ASSETS %	RANK	EQUITY %	RANK	10-year growth rate %	RANK	10-year growth rate %	RANK	1986 %	RANK		RANK
Anchor Glass Container 424	**587**	16	**4**	8	**22**	12	**(42)**	13	**4**	9	**8**	3	**38**	3	—		—		—		**5,410**	15
Diamond-Bathurst 474	**492**	17	**21**	2	**(6)**	16	—		—		—		—		—		—		**(54)**	14	**5,300**	16
Moore McCormack 480	**462**	18	**(21)**	18	**(121)**	18	—		—		—		—		—		**4**	12	**(17)**	13	**2,900**	18
CHEMICALS 44 COMPANIES																						
Du Pont (E.I.) de Nemours 9	**27,148**	1	**(8)**	36	**1,538**	1	**38**	11	**6**	18	**6**	21	**11**	26	**7**	9	**13**	13	**28**	12	**141,268**	1
Procter & Gamble 18	**15,439**	2	**14**	5	**709**	3	**12**	20	**5**	26	**5**	24	**12**	22	**6**	12	**10**	23	**14**	23	**74,500**	2
Dow Chemical 27	**11,113**	3	**(4)**	29	**732**	2	**1,162**	1	**7**	14	**6**	18	**14**	14	**1**	18	**9**	27	**48**	3	**51,300**	4
Union Carbide 42	**7,828**	4	**(13)**	40	**496**	4	—		**6**	15	**7**	15	**49**	1	**7**	10	**11**	19	**43**	5	**50,292**	5
Monsanto 55	**6,879**	5	**2**	23	**433**	6	—		**6**	16	**5**	26	**11**	27	**1**	20	**11**	18	**66**	1	**51,703**	3
Grace (W.R.) 56	**6,808**	6	**(6)**	32	**472**	5	**222**	3	**7**	9	**12**	2	**36**	4	**12**	6	**12**	15	**7**	27	**41,400**	6
American Cyanamid 94	**3,816**	7	**4**	18	**203**	9	**57**	8	**5**	20	**6**	23	**12**	23	**4**	15	**16**	10	**39**	9	**34,462**	7
BASF 106	**3,645**	8	**42**	1	**105**	16	**168**	5	**3**	33	**5**	32	**11**	28	—		—		—		**20,005**	10
Bayer USA 117	**3,410**	9	**6**	12	**94**	18	**15**	19	**3**	34	**4**	34	**12**	24	—		—		—		**19,037**	11
FMC 131	**3,003**	10	**(8)**	35	**153**	11	**(22)**	29	**5**	23	**6**	22	—		**(4)**	26	**5**	31	**(60)**	33	**24,966**	9
Celanese 134	**2,891**	11	**(5)**	31	**213**	8	**20**	16	**7**	8	**9**	10	**22**	5	**15**	3	**24**	2	**64**	2	**16,800**	13
Hercules 148	**2,615**	12	**1**	25	**227**	7	**70**	7	**9**	5	**8**	12	**13**	19	**5**	13	**12**	16	**33**	10	**25,120**	8
Engelhard 161	**2,290**	13	**1**	24	**53**	27	**25**	15	**2**	35	**5**	28	**9**	33	—		—		**19**	20	**6,900**	27
Sherwin-Williams 163	**2,253**	14	**3**	20	**106**	15	**42**	10	**5**	24	**9**	9	**22**	7	**19**	2	**22**	6	**27**	14	**13,706**	16
National Distillers & Chem. 171	**2,094**	15	**7**	11	**76**	22	**(2)**	25	**4**	30	**3**	37	**7**	35	**(5)**	27	**14**	12	**28**	13	**13,695**	17
Rohm & Haas 172	**2,067**	16	**1**	26	**138**	12	**(2)**	26	**7**	13	**7**	14	**14**	16	**13**	5	**20**	7	**40**	8	**12,060**	19
Air Products & Chemicals 179	**1,982**	17	**8**	8	**5**	39	**(97)**	31	**0**	39	**0**	39	**0**	38	**(23)**	29	**10**	24	**12**	24	**16,600**	14
Morton Thiokol 184	**1,950**	18	**(0)**	27	**133**	13	**(33)**	30	**7**	10	**9**	8	**16**	11	—		**23**	5	**3**	28	**17,900**	12
Olin 204	**1,707**	19	**(10)**	38	**75**	23	—		**4**	29	**5**	29	**12**	25	**1**	19	**12**	14	**14**	22	**13,200**	18
Int'l. Minerals & Chemical 205	**1,703**	20	**5**	17	**(217)**	41	—		—		—		—		—		**6**	29	**(20)**	31	**13,900**	15
Koppers 206	**1,696**	21	**(7)**	33	**77**	21	—		**5**	27	**8**	13	**16**	13	**(2)**	25	**7**	28	**44**	4	**10,944**	20
American Hoechst 210	**1,650**	22	**(1)**	28	**38**	30	**561**	2	**2**	36	**3**	36	**5**	37	—		—		—		**8,844**	23
Ethyl 215	**1,579**	23	**2**	22	**178**	10	**52**	9	**11**	1	**10**	5	**19**	8	**12**	7	**27**	1	**40**	7	**10,500**	21
Cabot 249	**1,310**	24	**(41)**	43	**71**	25	—		**5**	19	**5**	31	**12**	21	**10**	8	**19**	8	**22**	18	**6,600**	28
NL Industries 252	**1,283**	25	**(10)**	39	**(324)**	42	—		—		—		—		—		**2**	32	**(33)**	32	**5,025**	32
Pennwalt 276	**1,108**	26	**5**	15	**52**	28	—		**5**	25	**5**	27	**11**	29	**0**	21	**11**	21	**22**	17	**9,600**	22
Dow Corning 283	**1,085**	27	**20**	3	**111**	14	**16**	18	**10**	3	**10**	7	**18**	9	—		—		—		**6,400**	30
National Starch & Chemical 287	**1,064**	28	**21**	2	**72**	24	**9**	22	**7**	11	**10**	6	**18**	10	—		—		—		**6,464**	29
Sun Chemical 300	**985**	29	**11**	7	—		—		—		—		—		—		—		—		—	
Lubrizol 301	**977**	30	**8**	9	**78**	20	**30**	12	**8**	7	**9**	11	**14**	17	**5**	14	**10**	22	**16**	21	**4,802**	34
HIMONT 304	**974**	31	—		**97**	17	—		**10**	4	**11**	4	**22**	6	—		—		—		**2,826**	39
Tyler 314	**961**	32	**5**	14	**12**	38	**(22)**	28	**1**	38	**2**	38	**7**	36	**(2)**	24	**11**	17	**(16)**	30	**7,525**	25
CF Industries 365	**766**	33	**(17)**	41	—		—		—		—		—		—		—		—		**1,352**	42
Reichhold Chemicals 366	**766**	34	**(7)**	34	**16**	37	—		**2**	37	**3**	35	**8**	34	**(1)**	22	**9**	25	**0**	29	**3,958**	38
GAF 371	**754**	35	**3**	19	**81**	19	**4**	24	**11**	2	**6**	17	**13**	18	**30**	1	**23**	4	**25**	16	**4,200**	37
Insilco 374	**745**	36	**(8)**	37	**33**	33	**28**	13	**4**	28	**5**	33	**10**	32	**4**	17	**15**	11	**7**	25	**7,200**	26
Nalco Chemical 375	**736**	37	**8**	10	**64**	26	**(13)**	27	**9**	6	**11**	3	**16**	12	**4**	16	**9**	26	**7**	26	**4,868**	33
Ferro 377	**725**	38	**11**	6	**24**	35	**171**	4	**3**	32	**5**	25	**11**	31	**(8)**	28	**11**	20	**25**	15	**7,830**	24
Dexter 396	**650**	39	**3**	21	**34**	32	**18**	17	**5**	22	**6**	20	**13**	20	**6**	11	**17**	9	**32**	11	**5,500**	31
Big Three Industries 399	**646**	40	**(23)**	42	**(5)**	40	—		—		—		—		—		—		—		**2,473**	40
Georgia Gulf 430	**583**	41	**(5)**	30	**39**	29	**7**	23	**7**	12	**15**	1	**44**	2	—		—		—		**1,015**	43
Liquid Air 439	**571**	42	**5**	16	**35**	31	**9**	21	**6**	17	**5**	30	**11**	30	**(1)**	23	**6**	30	**20**	19	**4,390**	36
Vista Chemical 446	**550**	43	**6**	13	**29**	34	**142**	6	**5**	21	**6**	19	**36**	3	—		—		—		**1,534**	41
Fuller (H.B.) 457	**528**	44	**15**	4	**19**	36	**27**	14	**4**	31	**6**	16	**14**	15	**13**	4	**23**	3	**42**	6	**4,500**	35
COMPUTERS (includes office equipment) 23 COMPANIES																						
IBM 4	**51,250**	1	**2**	17	**4,789**	1	**(27)**	16	**9**	3	**8**	8	**14**	7	**7**	10	**11**	11	**(20)**	17	**403,508**	1
Digital Equipment 44	**7,590**	2	**14**	7	**617**	2	**38**	7	**8**	6	**9**	6	**11**	12	**17**	5	**7**	13	**(21)**	18	**94,700**	3
Unisys 46	**7,432**	3	**48**	3	**(43)**	21	—		—		—		—		—		**3**	14	**31**	8	**98,300**	2
Hewlett-Packard 51	**7,102**	4	**9**	14	**516**	3	**6**	11	**7**	9	**8**	10	**12**	11	**17**	4	**15**	8	**15**	12	**82,000**	4
NCR 75	**4,882**	5	**13**	9	**337**	4	**7**	10	**7**	10	**8**	7	**14**	6	**14**	7	**20**	7	**12**	13	**62,000**	5
Control Data 119	**3,347**	6	**(9)**	21	**(265)**	23	—		—		—		—		—		**9**	12	**27**	9	**34,409**	6
Wang Laboratories 146	**2,643**	7	**12**	11	**51**	10	**228**	1	**2**	17	**2**	17	**4**	16	**17**	6	**29**	6	**(41)**	21	**31,628**	7
Pitney Bowes 178	**1,987**	8	**8**	15	**168**	5	**12**	9	**8**	4	**8**	9	**18**	4	**19**	3	**30**	3	**54**	4	**29,166**	8

RANKED WITHIN INDUSTRY

COMPANY 500 RANK	SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	SALES %	RANK	ASSETS %	RANK	EQUITY %	RANK	10-year growth rate %	RANK	10-year growth rate %	RANK	1986 %	RANK		RANK
Apple Computer 190	**1,902**	9	**(1)**	19	**154**	6	**151**	2	**8**	7	**13**	2	**22**	3	—		—		**84**	2	**5,586**	19
Gould 235	**1,437**	10	**(5)**	20	**(102)**	22	—		—		—		—		—		**(1)**	17	**(46)**	22	**10,613**	11
Data General 255	**1,268**	11	**2**	18	**(29)**	20	—		—		—		—		—		**3**	15	**(35)**	20	**15,565**	9
Prime Computer 337	**860**	12	**12**	13	**47**	11	**(19)**	15	**5**	13	**7**	11	**11**	13	**29**	2	**29**	4	**(24)**	19	**8,621**	12
Tandem Computers 364	**768**	13	**23**	5	**64**	9	**86**	3	**8**	5	**9**	5	**12**	9	—		—		**54**	5	**5,719**	16
Amdahl 372	**747**	14	**(13)**	23	**42**	13	**46**	6	**6**	12	**4**	16	**8**	14	**(16)**	11	**11**	10	**62**	3	**7,100**	14
Nashua 381	**704**	15	**13**	8	**21**	16	**26**	8	**3**	16	**6**	12	**12**	10	**9**	9	**14**	9	**50**	6	**5,702**	17
Storage Technology 386	**696**	16	**3**	16	**36**	14	—		**5**	14	**4**	15	—		**9**	8	**2**	16	**100**	1	**8,608**	13
AM International 390	**689**	17	**13**	10	**6**	18	**(78)**	17	**1**	18	**1**	18	**2**	17	**(23)**	12	**(7)**	18	**6**	14	**12,703**	10
Compaq Computer 409	**625**	18	**24**	4	**43**	12	**61**	5	**7**	11	**11**	4	**23**	2	—		—		**45**	7	**2,209**	23
Intergraph 417	**606**	19	**15**	6	**70**	8	**4**	12	**12**	2	**11**	3	**14**	5	—		—		**(54)**	23	**5,700**	18
Cray Research 421	**597**	20	**57**	2	**125**	7	**65**	4	**21**	1	**18**	1	**28**	1	—		**52**	1	**23**	10	**3,999**	22
Computervision 471	**495**	21	**12**	12	**(6)**	19	—		—		—		—		—		**35**	2	**6**	15	**4,770**	21
SCI Systems 477	**470**	22	**(13)**	22	**14**	17	**0**	14	**3**	15	**5**	13	**12**	8	**29**	1	**29**	5	**17**	11	**5,185**	20
Xidex 493	**432**	23	**67**	1	**32**	15	**1**	13	**7**	8	**5**	14	**7**	15	—		—		**(19)**	16	**6,400**	15
ELECTRONICS 47 COMPANIES																						
General Electric 6	**35,211**	1	**24**	7	**2,492**	1	**7**	19	**7**	7	**7**	15	**16**	10	**10**	15	**17**	18	**22**	10	**359,000**	1
American Tel. & Tel. 7	**34,087**	2	**(2)**	35	**139**	11	**(91)**	33	**0**	36	**0**	36	**0**	36	**(38)**	34	**4**	41	**5**	26	**316,900**	2
Westinghouse Electric 28	**10,731**	3	**0**	32	**671**	2	**11**	16	**6**	10	**8**	12	**22**	2	**13**	9	**26**	4	**28**	7	**117,267**	4
ITT 41	**7,896**	4	**(38)**	45	**494**	3	**68**	3	**6**	9	**4**	26	**7**	29	**(2)**	31	**12**	32	**44**	3	**123,000**	3
Raytheon 48	**7,308**	5	**14**	15	**393**	5	**5**	21	**5**	15	**11**	5	**20**	4	**14**	8	**20**	13	**29**	6	**75,000**	9
Honeywell 52	**7,087**	6	**7**	25	**(398)**	47	—		—		—		—		—		**13**	28	**(18)**	40	**78,097**	7
TRW 58	**6,450**	7	**(2)**	36	**218**	6	—		**3**	24	**6**	20	**18**	5	**6**	21	**13**	26	**(1)**	30	**78,556**	6
Motorola 60	**5,888**	8	**8**	21	**194**	8	**169**	1	**3**	25	**4**	24	**7**	27	**4**	25	**9**	37	**(7)**	33	**94,400**	5
Texas Instruments 72	**4,974**	9	**1**	31	**29**	28	—		**1**	35	**1**	35	**2**	35	**(16)**	33	**3**	42	**14**	16	**77,270**	8
Emerson Electric 73	**4,953**	10	**7**	27	**409**	4	**2**	23	**8**	4	**11**	6	**17**	6	**11**	14	**14**	25	**6**	25	**60,700**	10
North American Philips 82	**4,532**	11	**3**	30	**69**	19	**(16)**	26	**2**	32	**2**	31	**6**	31	**0**	28	**13**	27	**14**	17	**50,440**	12
Litton Industries 83	**4,521**	12	**(2)**	34	**71**	18	**(76)**	31	**2**	31	**2**	32	**7**	28	**17**	6	**21**	12	**(12)**	37	**55,500**	11
Whirlpool 93	**4,009**	13	**15**	13	**200**	7	**10**	17	**5**	16	**9**	10	**15**	13	**10**	16	**15**	20	**41**	4	**30,956**	17
Ecton 95	**3,812**	14	**4**	29	**138**	12	**(40)**	29	**4**	23	**5**	22	**11**	21	**2**	27	**15**	21	**18**	12	**43,438**	13
Cooper Industries 116	**3,433**	15	**12**	17	**148**	10	**9**	18	**4**	19	**4**	23	**10**	23	**5**	24	**11**	33	**2**	29	**40,200**	14
Kidde 145	**2,649**	16	**10**	18	**25**	32	**(65)**	30	**1**	34	**1**	33	**3**	33	**(9)**	32	**13**	29	**(7)**	32	**38,000**	15
Johnson Controls 147	**2,639**	17	**48**	5	**96**	15	**23**	12	**4**	22	**6**	19	**12**	20	**9**	17	**13**	30	**(39)**	45	**26,900**	20
Harris 166	**2,217**	18	**(3)**	37	**60**	22	**(26)**	27	**3**	29	**3**	27	**7**	30	**3**	26	**10**	36	**12**	19	**26,700**	21
Singer 169	**2,095**	19	**(13)**	42	**83**	16	**0**	24	**4**	20	**6**	16	**14**	17	**(0)**	29	**8**	38	**(10)**	35	**28,000**	19
AMP 185	**1,933**	20	**18**	9	**164**	9	**52**	6	**9**	3	**9**	9	**14**	16	**13**	10	**17**	19	**2**	28	**21,800**	22
Allegheny International 186	**1,924**	21	**(12)**	41	**(164)**	45	—		—		—		—		—		**(2)**	44	**(34)**	44	**18,100**	28
Zenith Electronics 191	**1,892**	22	**17**	12	**(10)**	40	—		—		—		—		—		**1**	43	**7**	23	**37,000**	16
Maytag 194	**1,838**	23	**169**	2	**111**	13	**55**	5	**6**	12	**13**	1	**20**	3	**8**	18	**18**	15	**26**	8	**12,205**	33
National Semiconductor 227	**1,478**	24	**(17)**	44	**(92)**	44	—		—		—		—		—		**6**	39	**(15)**	39	**30,800**	18
Square D 238	**1,403**	25	**0**	33	**99**	14	**13**	14	**7**	8	**9**	11	**15**	14	**6**	19	**11**	34	**13**	18	**20,600**	23
National Service Industries 253	**1,283**	26	**8**	22	**71**	17	**5**	20	**6**	13	**10**	7	**15**	12	**12**	11	**25**	5	**18**	11	**19,300**	26
Intel 256	**1,265**	27	**(7)**	40	**(173)**	46	—		—		—		—		—		**10**	35	**(28)**	43	**18,700**	27
E-Systems 271	**1,135**	28	**20**	8	**62**	21	**37**	9	**5**	14	**10**	8	**16**	11	**11**	13	**22**	9	**2**	27	**14,932**	30
Nortek 313	**963**	29	**60**	4	**29**	29	**65**	4	**3**	27	**3**	28	**12**	19	**57**	1	**21**	11	**16**	13	**10,300**	36
Chicago Pacific 317	**955**	30	**963**	1	**29**	30	**(38)**	28	**3**	26	**2**	30	**9**	26	—		—		**45**	2	**19,800**	25
Figgie International 323	**920**	31	**14**	14	**42**	26	**45**	7	**5**	18	**7**	14	**14**	15	**6**	20	**23**	6	**37**	5	**16,300**	29
Varian Associates 325	**912**	32	**(6)**	38	**(15)**	41	—		—		—		—		—		**14**	23	**(19)**	41	**11,600**	34
M/A-Com 331	**886**	33	**4**	28	**9**	36	**(78)**	32	**1**	33	**1**	34	**2**	34	**(1)**	30	**19**	14	**(14)**	38	**9,027**	38
Champion Spark Plug 332	**884**	34	**7**	26	**17**	35	**13**	15	**2**	30	**3**	29	**5**	32	—		**5**	40	**15**	15	**12,400**	32
General Instrument 343	**841**	35	**(15)**	43	**(67)**	43	—		—		—		—		—		**13**	31	**8**	22	**20,500**	24
Raychem 358	**798**	36	**18**	10	**49**	25	**73**	2	**6**	11	**6**	17	**11**	22	**27**	3	**17**	16	**(9)**	34	**9,928**	37
Telex 387	**695**	37	**18**	11	**67**	20	**27**	10	**10**	2	**13**	2	**25**	1	**22**	4	**36**	1	**12**	20	**7,384**	42
Loral 393	**664**	38	**32**	6	**53**	24	**26**	11	**8**	5	**8**	13	**17**	7	**18**	5	**30**	2	**7**	24	**8,100**	40
First City Industries 401	**638**	39	**(7)**	39	**(10)**	39	—		—		—		—		—		**17**	17	**(21)**	42	**8,340**	39
Tracor 404	**632**	40	**12**	16	**19**	34	**41**	8	**3**	28	**4**	25	**9**	25	**5**	23	**22**	7	**(11)**	36	**10,500**	35
Pittway 426	**586**	41	**8**	20	**28**	31	**(11)**	25	**5**	17	**6**	18	**10**	24	**5**	22	**14**	22	**25**	9	**7,200**	43
Bairnco 428	**585**	42	**9**	19	**23**	33	**3**	22	**4**	21	**5**	21	**12**	18	**17**	7	**28**	3	**12**	21	**5,342**	45

RANKED WITHIN INDUSTRY

COMPANY 500 RANK	SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	SALES %	RANK	ASSETS %	RANK	EQUITY %	RANK	10-year growth rate %	RANK	10-year growth rate %	RANK	1986 %	RANK		RANK
Advanced Micro Devices 436	**576**	43	**(38)**	46	**(37)**	42	—		—		—		—		**41**	2	**22**	8	**(53)**	47	**13,689**	31
Hubbell 443	**559**	44	**7**	24	**54**	23	**14**	13	**10**	1	**13**	3	**17**	9	**12**	12	**21**	10	**16**	14	**5,603**	44
Scientific-Atlanta 478	**469**	45	**7**	23	**(9)**	38	—		—		—		—		—		**14**	24	**(3)**	31	**4,100**	46
Seagate Technology 481	**460**	46	**114**	3	**35**	27	—		**8**	6	**11**	4	**17**	8	—		—		**164**	1	**8,075**	41
ATCOR 483	**458**	47	—		**(4)**	37	—		—		—		—		—		—		**(44)**	46	**2,415**	47
FOOD 53 COMPANIES																						
Occidental Petroleum 19	**15,344**	1	**6**	26	**181**	12	**(74)**	35	**1**	36	**1**	39	**3**	38	**(13)**	32	**10**	33	**(3)**	31	**51,353**	5
Kraft 37	**8,742**	2	**(12)**	49	**413**	1	**(11)**	31	**5**	10	**9**	13	**23**	5	**6**	23	**21**	16	**40**	13	**51,300**	6
Sara Lee 40	**7,938**	3	**(2)**	39	**223**	6	**8**	24	**3**	22	**6**	22	**19**	13	**10**	12	**24**	12	**37**	17	**87,000**	2
ConAgra 59	**5,911**	4	**8**	22	**105**	15	**15**	17	**2**	31	**6**	25	**21**	11	**10**	16	**41**	2	**37**	16	**33,642**	14
Pillsbury 61	**5,848**	5	**25**	6	**208**	10	**8**	23	**4**	17	**6**	26	**16**	22	**13**	9	**17**	21	**13**	25	**108,100**	1
Ralston Purina 65	**5,515**	6	**(6)**	45	**389**	2	**52**	6	**7**	3	**9**	9	**39**	1	**16**	4	**19**	19	**53**	6	**62,508**	3
Archer Daniels Midland 67	**5,336**	7	**13**	13	**230**	5	**41**	8	**4**	14	**7**	18	**11**	29	**9**	18	**13**	26	**12**	26	**10,386**	23
Borden 70	**5,002**	8	**6**	24	**223**	7	**15**	14	**4**	13	**6**	23	**16**	23	**9**	17	**22**	15	**39**	15	**33,800**	13
General Mills 80	**4,587**	9	**(19)**	52	**184**	11	—		**4**	16	**9**	12	**27**	3	**7**	21	**16**	23	**46**	11	**62,056**	4
CPC International 81	**4,549**	10	**8**	19	**219**	9	**54**	5	**5**	9	**6**	24	**23**	6	**6**	24	**19**	20	**61**	4	**39,000**	10
IC Industries 85	**4,439**	11	**(16)**	50	**(137)**	43	—		—		—		—		—		**22**	14	**24**	20	**38,162**	12
Campbell Soup 87	**4,379**	12	**10**	17	**223**	8	**13**	22	**5**	7	**8**	14	**15**	24	**8**	19	**17**	22	**18**	23	**46,976**	8
Heinz (H.J.) 88	**4,366**	13	**8**	20	**302**	4	**13**	21	**7**	5	**11**	5	**22**	7	**15**	5	**27**	8	**28**	19	**47,000**	7
Hanson Industries N.A. 97	**3,769**	14	**65**	2	**103**	16	**(7)**	29	3	23	**3**	32	**6**	36	—		—		—		**42,145**	9
Quaker Oats 104	**3,671**	15	**4**	27	**180**	13	**15**	18	**5**	8	**9**	11	**21**	9	**14**	7	**25**	11	**43**	14	**29,500**	15
Kellogg 120	**3,341**	16	**14**	11	**319**	3	**13**	20	**10**	1	**15**	1	**35**	2	**12**	11	**20**	17	**52**	7	**17,383**	17
United Brands 122	**3,307**	17	**3**	29	**54**	18	**133**	2	**2**	33	**6**	27	**13**	26	**10**	14	**14**	25	**20**	22	**39,000**	11
Staley Continental 132	**2,996**	18	**2**	31	**26**	28	**293**	1	**1**	37	**1**	37	**4**	37	**(9)**	31	**10**	32	**(2)**	30	**9,411**	26
Swift Independent 141	**2,763**	19	**(4)**	43	**4**	39	—		**0**	39	**1**	38	**17**	21	—		—		—		**6,900**	30
Land O'Lakes 167	**2,215**	20	**(2)**	40	—		—		—		—		—		—		—		—		**6,641**	31
Hershey Foods 168	**2,170**	21	**7**	23	**133**	14	**18**	13	**6**	6	**10**	8	**18**	16	**10**	15	**27**	9	**47**	9	**15,980**	18
Hormel (Geo. A.) 181	**1,960**	22	**30**	4	**39**	23	**1**	28	**2**	28	**7**	19	**11**	28	**10**	13	**23**	13	**36**	18	**5,965**	32
Monfort of Colorado 216	**1,577**	23	**8**	21	**25**	29	**73**	4	**2**	34	**10**	7	**22**	8	—		**29**	6	**68**	3	**4,257**	39
Tyson Foods 226	**1,504**	24	**32**	3	**50**	20	**44**	7	**3**	18	**7**	20	**25**	4	**22**	1	**58**	1	**99**	1	**25,000**	16
Central Soya 228	**1,476**	25	**(10)**	48	**2**	40	**(76)**	36	**0**	40	**0**	40	—		—		—		—		**3,500**	40
Wilson Foods 229	**1,454**	26	**(5)**	44	**(24)**	42	—		—		—		—		—		—		**57**	5	**4,700**	37
Mid-America Dairymen 237	**1,420**	27	**6**	25	—		—		—		—		—		—		—		—		**3,000**	43
Gold Kist 239	**1,395**	28	**(7)**	46	—		—		—		—		—		—		—		—		**9,428**	25
International Multifoods 240	**1,355**	29	**12**	14	**25**	30	**15**	16	**2**	30	**4**	29	**11**	31	**3**	26	**13**	27	**(5)**	33	**9,386**	27
Amstar 245	**1,322**	30	**1**	35	**35**	25	**19**	12	**3**	24	**6**	21	**21**	10	—		—		—		**7,630**	28
Lipton (Thomas J.) 250	**1,303**	31	**3**	30	**91**	17	**14**	19	**7**	4	**11**	4	**18**	20	—		—		—		**5,238**	35
Dean Foods 254	**1,269**	32	**23**	7	**41**	22	**28**	10	**3**	19	**10**	6	**20**	12	**18**	3	**32**	5	**(0)**	29	**5,962**	33
Federal Co. 262	**1,217**	33	**(4)**	42	**37**	24	**3**	26	**3**	21	**9**	10	**14**	25	**2**	28	**27**	7	**45**	12	**11,000**	22
Anderson Clayton 292	**1,056**	34	**(42)**	53	**17**	32	**1**	27	**2**	35	**2**	35	**3**	39	—		—		—		**13,800**	20
Winn Enterprises 295	**1,017**	35	**86**	1	—		—		—		—		—		—		—		—		—	
McCormick 303	**976**	36	**12**	15	**30**	26	**7**	25	**3**	20	**5**	28	**11**	30	**8**	20	**12**	31	**18**	24	**7,350**	29
Gerber Products 308	**968**	37	**4**	28	**45**	21	**(19)**	33	**5**	11	**8**	17	**12**	27	**6**	25	**20**	18	**1**	28	**15,253**	19
Smithfield Foods 336	**864**	38	**29**	5	**5**	38	**35**	9	**1**	38	**4**	31	**19**	14	**13**	10	**32**	4	**87**	2	**4,800**	36
Interstate Bakeries 380	**708**	39	**1**	34	**15**	34	**104**	3	**2**	27	**8**	15	**18**	19	**20**	2	**12**	28	**(5)**	32	**11,012**	21
Wrigley (Wm. Jr.) 383	**699**	40	**13**	12	**54**	19	**24**	11	**8**	2	**14**	2	**18**	15	**7**	22	**12**	29	**52**	8	**5,500**	34
Flowers Industries 385	**698**	41	**12**	16	**30**	27	**15**	15	**4**	15	**8**	16	**18**	17	**14**	6	**32**	3	**6**	27	**10,000**	24
Savannah Foods & Indus. 402	**635**	42	**1**	33	**10**	36	**(40)**	34	**2**	32	**3**	33	**9**	34	**1**	30	**26**	10	**(21)**	34	**1,364**	48
Ag Processing 408	**625**	43	**(3)**	41	—		—		—		—		—		—		—		—		**630**	52
Ocean Spray Cranberries 410	**624**	44	**17**	10	—		—		—		—		—		—		—		—		**1,860**	47
Thorn Apple Valley 415	**611**	45	**(7)**	47	**(5)**	41	—		—		—		—		—		—		—		**2,460**	45
Universal Foods 418	**603**	46	**23**	8	**15**	33	**(11)**	30	**3**	25	**4**	30	**9**	33	**2**	27	**15**	24	**23**	21	**4,700**	38
Riceland Foods 454	**532**	47	**(2)**	37	**24**	31	—		**4**	12	**12**	3	**18**	18	—		—		—		**1,944**	46
Calif. & Hawaiian Sugar 459	**526**	48	**(2)**	38	—		—		—		—		—		—		—		—		**1,325**	49
American Maize-Products 464	**510**	49	**18**	9	**10**	37	—		**2**	29	**3**	34	**8**	35	**2**	29	**12**	30	**46**	10	**3,218**	41
Sun-Diamond Growers 470	**496**	50	**2**	32	—		—		—		—		—		—		—		—		**2,500**	44
Amalgamated Sugar 472	**493**	51	**9**	18	**12**	35	**(14)**	32	**2**	26	**2**	36	**10**	32	**14**	8	—		—		**3,000**	42
Wisconsin Dairies 482	**459**	52	**(1)**	36	—		—		—		—		—		—		—		—		**855**	50

THE 500 BY INDUSTRY ranked by 11 measures

COMPANY 500 RANK	RANKED WITHIN INDUSTRY: SALES $ Mil.	RANK	SALES % change from 1985	RANK	NET INCOME $ Mil.	RANK	NET INCOME % change from 1985	RANK	NET INCOME AS % OF SALES %	RANK	NET INCOME AS % OF ASSETS %	RANK	NET INCOME AS % OF EQUITY %	RANK	EARNINGS PER SHARE 10-year growth rate %	RANK	TOTAL RETURN TO INVESTORS: 10-year growth rate %	RANK	TOTAL RETURN TO INVESTORS: 1986 %	RANK	EMPLOYEES	RANK
Michigan Milk Prod. Assoc. 494	**432**	53	**(17)**	51	—		—		—		—		—		—		—		—		**730**	51
FOREST PRODUCTS 33 COMPANIES																						
Georgia-Pacific 50	**7,223**	1	**8**	18	**296**	2	**58**	9	**4**	23	**6**	10	**12**	17	**3**	17	**4**	27	**43**	9	**39,000**	2
Weyerhaeuser 62	**5,652**	2	**9**	17	**277**	3	**38**	11	**5**	17	**4**	21	**8**	23	**(2)**	23	**2**	28	**27**	19	**37,497**	3
International Paper 66	**5,501**	3	**22**	5	**305**	1	**129**	4	**6**	13	**4**	24	**8**	24	**0**	20	**6**	25	**53**	5	**44,000**	1
Champion International 86	**4,388**	4	**(24)**	33	**201**	5	**23**	15	**5**	19	**3**	26	**8**	26	**(4)**	24	**5**	26	**26**	24	**32,200**	5
Kimberly-Clark 90	**4,303**	5	**6**	22	**269**	4	**1**	20	**6**	8	**7**	5	**14**	8	**8**	9	**20**	8	**23**	27	**36,490**	4
Boise Cascade 100	**3,740**	6	**0**	29	**102**	11	**(3)**	22	**3**	26	**3**	28	**6**	29	**(0)**	22	**11**	21	**32**	16	**23,333**	7
Scott Paper 115	**3,437**	7	**13**	13	**187**	7	**(7)**	26	**5**	14	**5**	18	**14**	10	**9**	7	**17**	13	**27**	22	**24,900**	6
Mead 125	**3,218**	8	**17**	9	**36**	23	**(61)**	32	**1**	32	**1**	32	**3**	32	**(11)**	26	**16**	17	**26**	26	**20,600**	9
James River Corp. of Va. 149	**2,607**	9	**5**	25	**95**	12	**(6)**	24	**4**	24	**5**	16	**13**	14	**20**	1	**33**	1	**30**	17	**23,000**	8
Union Camp 173	**2,045**	10	**10**	16	**130**	9	**37**	12	**6**	7	**5**	19	**9**	21	**1**	19	**9**	23	**32**	15	**17,355**	10
Great Northern Nekoosa 174	**2,039**	11	**5**	23	**85**	14	**85**	6	**4**	22	**4**	22	**8**	25	**2**	18	**16**	14	**59**	2	**14,000**	14
Stone Container 175	**2,032**	12	**65**	2	**35**	24	**837**	1	**2**	31	**2**	29	**7**	27	**4**	15	**25**	4	**55**	4	**15,500**	12
Westvaco 196	**1,812**	13	**5**	24	**108**	10	**3**	19	**6**	11	**5**	14	**10**	20	**5**	12	**16**	16	**48**	6	**15,110**	13
Fort Howard Paper 222	**1,549**	14	**14**	12	**146**	8	**(7)**	25	**9**	4	**7**	6	**12**	15	**11**	6	**21**	7	**(4)**	31	**16,623**	11
Louisiana-Pacific 224	**1,506**	15	**19**	8	**188**	6	**242**	3	**12**	3	**10**	3	**20**	2	**16**	2	**12**	20	**46**	7	**12,714**	15
Temple-Inland 244	**1,329**	16	**7**	19	**81**	15	**(5)**	23	**6**	10	**5**	17	**9**	22	—		—		**33**	14	**11,000**	19
Willamette Industries 265	**1,200**	17	**4**	26	**75**	16	**24**	14	**6**	9	**7**	8	**14**	7	**6**	11	**13**	19	**36**	12	**8,370**	20
Avery International 273	**1,131**	18	**21**	6	**49**	21	**1**	21	**4**	21	**6**	13	**14**	9	**14**	4	**17**	12	**15**	28	**11,156**	18
Jefferson Smurfit 294	**1,044**	19	**66**	1	**28**	27	**66**	7	**3**	27	**4**	20	**20**	3	—		—		**188**	1	**7,800**	24
Potlatch 302	**976**	20	**3**	27	**70**	17	**86**	5	**7**	5	**6**	12	**12**	16	**5**	14	**9**	22	**57**	3	**7,966**	21
Esselte Business Systems 305	**973**	21	**40**	3	**46**	22	**33**	13	**5**	18	**6**	11	**13**	11	—		—		**27**	20	**12,084**	16
Sonoco Products 312	**964**	22	**11**	14	**55**	19	**11**	18	**6**	12	**10**	4	**16**	4	**12**	5	**25**	5	**26**	25	**12,001**	17
Federal Paper Board 319	**949**	23	**21**	7	**18**	30	**64**	8	**2**	30	**2**	31	**5**	31	**(8)**	25	**16**	15	**44**	8	**5,700**	26
Bowater 324	**920**	24	**2**	28	**49**	20	**(27)**	31	**5**	15	**3**	27	**11**	18	—		—		**27**	21	**4,800**	27
Bemis 335	**865**	25	**10**	15	**26**	29	**11**	17	**3**	25	**5**	15	**13**	12	**9**	8	**23**	6	**29**	18	**7,947**	23
Dennison Manufacturing 382	**701**	26	**6**	21	**30**	26	**351**	2	**4**	20	**6**	9	**13**	13	**5**	13	**20**	9	**6**	29	**7,959**	22
Southwest Forest Industries 394	**660**	27	**(6)**	31	**(2)**	33	—		—		—		—		—		**8**	24	**40**	11	**4,500**	30
Consolidated Papers 395	**653**	28	**(9)**	32	**88**	13	**(18)**	29	**13**	2	**12**	2	**16**	5	**14**	3	**27**	3	**(1)**	30	**4,357**	31
Pentair 411	**624**	29	**17**	10	**15**	31	**(24)**	30	**2**	28	**3**	25	**10**	19	**4**	16	**28**	2	**(7)**	32	**7,400**	25
Chesapeake 419	**600**	30	**32**	4	**14**	32	**(13)**	27	**2**	29	**2**	30	**6**	30	**(0)**	21	**18**	11	**33**	13	**4,556**	29
Georgia Kraft 444	**557**	31	**0**	30	**28**	28	**(13)**	28	**5**	16	**4**	23	**7**	28	—		—		—		**3,035**	33
Longview Fibre 475	**488**	32	**6**	20	**33**	25	**49**	10	**7**	6	**7**	7	**14**	6	**(17)**	27	**13**	18	**42**	10	**3,300**	32
Tambrands 476	**487**	33	**16**	11	**69**	18	**19**	16	**14**	1	**19**	1	**27**	1	**8**	10	**19**	10	**26**	23	**4,800**	28
FURNITURE 5 COMPANIES																						
Mohasco 368	**758**	1	**(0)**	5	**16**	5	**(7)**	3	**2**	5	**4**	5	**7**	5	**2**	5	**11**	5	**27**	1	**12,284**	1
Leggett & Platt 427	**586**	2	**22**	1	**35**	2	**44**	1	**6**	2	**10**	3	**19**	3	**17**	1	**28**	2	**18**	3	**8,500**	2
Miller (Herman) 456	**532**	3	**8**	2	**38**	1	**(8)**	4	**7**	1	**12**	1	**20**	2	**16**	2	**35**	1	**(13)**	5	**4,423**	5
Hon Industries 466	**504**	4	**6**	3	**29**	3	**12**	2	**6**	3	**11**	2	**21**	1	**15**	3	**23**	3	**23**	2	**5,806**	4
Bassett Furniture Industries 497	**422**	5	**3**	4	**19**	4	**(22)**	5	**5**	4	**7**	4	**8**	4	**3**	4	**16**	4	**(1)**	4	**8,300**	3
INDUSTRIAL AND FARM EQUIPMENT 33 COMPANIES																						
Caterpillar 47	**7,321**	1	**8**	10	**76**	7	**(62)**	15	**1**	18	**1**	18	**2**	18	**(16)**	16	**(0)**	29	**(3)**	22	**53,731**	1
Dresser Industries 105	**3,661**	2	**(11)**	26	**10**	18	—		**0**	22	**0**	22	**1**	22	**(25)**	20	**2**	24	**10**	13	**39,700**	3
Deere 111	**3,516**	3	**(13)**	27	**(229)**	31	—		—		—		—		—		**1**	26	**(18)**	25	**37,481**	5
American Standard 121	**3,325**	4	**(2)**	23	**188**	2	**755**	1	**6**	7	**9**	3	**22**	1	**10**	5	**18**	8	**15**	11	**38,900**	4
Teledyne 124	**3,241**	5	**(0)**	19	**238**	1	**(56)**	14	**7**	2	**9**	2	**15**	8	**16**	3	**27**	2	**(3)**	21	**44,800**	2
Ingersoll-Rand 139	**2,799**	6	**6**	12	**94**	5	**18**	8	**3**	12	**4**	14	**8**	14	**(2)**	14	**2**	23	**9**	14	**29,857**	6
Cummins Engine 160	**2,304**	7	**7**	11	**(107)**	30	—		—		—		—		—		**8**	16	**(4)**	23	**22,960**	8
Black & Decker 199	**1,791**	8	**3**	16	**6**	20	—		**0**	21	**0**	21	**1**	21	**(20)**	18	**1**	25	**(22)**	28	**21,700**	9
Brunswick 202	**1,717**	9	**12**	6	**110**	4	**10**	9	**6**	3	**6**	10	**16**	7	**17**	2	**29**	1	**58**	1	**26,800**	7
Baker International 220	**1,557**	10	**(18)**	29	**(273)**	32	—		—		—		—		—		**4**	21	**(30)**	29	**14,908**	13
TRINOVA 231	**1,447**	11	**(25)**	31	**123**	3	**64**	5	**8**	1	**11**	1	**22**	2	**8**	7	**12**	12	**46**	3	**19,340**	10
Dover 234	**1,440**	12	**0**	18	**84**	6	**(16)**	12	**6**	6	**8**	4	**13**	9	**11**	4	**20**	3	**13**	12	**16,539**	12
Foster Wheeler 257	**1,258**	13	—		**28**	13	—		**2**	15	**2**	15	**6**	15	**2**	12	**13**	11	**6**	17	**11,300**	18
Crane 264	**1,204**	14	**10**	8	**38**	11	**118**	3	**3**	13	**6**	9	**22**	3	**3**	10	**14**	10	**29**	6	**11,500**	16

RANKED WITHIN INDUSTRY

COMPANY 500 RANK	SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	SALES %	RANK	ASSETS %	RANK	EQUITY %	RANK	10-year growth rate %	RANK	10-year growth rate %	RANK	1986 %	RANK		RANK
Rexnord 281	**1,094**	15	**(1)**	20	**(104)**	29	—		—		—		—		—		**7**	17	**33**	5	**13,600**	15
Timken 290	**1,058**	16	**(3)**	24	**3**	23	—		**0**	23	**0**	23	**0**	23	**(27)**	21	**3**	22	**(2)**	20	**16,565**	11
Outboard Marine 306	**972**	17	**10**	7	**14**	17	**(51)**	13	**1**	16	**2**	17	**4**	17	**(6)**	15	**12**	13	**(1)**	19	**9,310**	24
Clark Equipment 318	**954**	18	**(1)**	22	**(61)**	27	—		—		—		—		—		**(3)**	31	**(22)**	27	**9,488**	23
Federal-Mogul 320	**942**	19	**5**	13	**4**	22	**(93)**	18	**0**	20	**0**	20	**1**	20	**(18)**	17	**19**	5	**8**	16	**14,011**	14
Fuqua Industries 345	**830**	20	**(10)**	25	**40**	9	**19**	7	**5**	8	**6**	11	**16**	6	**17**	1	**19**	6	**(38)**	32	**11,000**	19
Harnischfeger Industries 346	**830**	21	**71**	2	**1**	24	**(92)**	17	**0**	24	**0**	24	—		—		**1**	27	**16**	10	**10,000**	22
Tecumseh Products 347	**821**	22	**(1)**	21	**51**	8	**(16)**	11	**6**	4	**7**	7	**10**	13	**4**	9	**16**	9	**8**	15	**10,039**	21
Hughes Tool 355	**806**	23	**(36)**	32	**(476)**	33	—		—		—		—		—		**(1)**	30	**(32)**	30	**11,500**	17
Allis-Chalmers 363	**771**	24	**(20)**	30	**(9)**	25	—		—		—		—		—		**(18)**	32	**(36)**	31	**10,956**	20
Briggs & Stratton 373	**746**	25	**4**	14	**34**	12	**2**	10	**5**	9	**8**	6	**12**	11	**2**	13	**6**	19	**22**	8	**8,299**	25
Joy Manufacturing 388	**693**	26	**(13)**	28	**(84)**	28	—		—		—		—		—		**6**	18	**55**	2	**7,331**	27
York International 389	**690**	27	**166**	1	**8**	19	**(74)**	16	**1**	17	**2**	16	**5**	16	—		—		—		**6,600**	28
Eagle-Picher Industries 397	**648**	28	**1**	17	**39**	10	—		**6**	5	**8**	5	**22**	4	**5**	8	**11**	15	**24**	7	**7,900**	26
Cameron Iron Works 413	**616**	29	**13**	5	**5**	21	**26**	6	**1**	19	**1**	19	**1**	19	**(21)**	19	**0**	28	**(21)**	26	**5,648**	29
Roper 414	**614**	30	**8**	9	**14**	16	—		**2**	14	**6**	8	**20**	5	**10**	6	**19**	7	**18**	9	**4,200**	33
Coleman 468	**502**	31	**13**	4	**17**	14	**73**	4	**3**	11	**5**	12	**10**	12	**2**	11	**12**	14	**2**	18	**5,446**	30
Allied Products 498	**421**	32	**52**	3	**16**	15	**349**	2	**4**	10	**4**	13	**12**	10	—		**19**	4	**40**	4	**4,514**	31
Katy Industries 499	**420**	33	**3**	15	**(10)**	26	—		—		—		—		—		**6**	20	**(16)**	24	**4,219**	32
JEWELRY, SILVERWARE 1 COMPANY																						
Jostens 431	**582**	1	**10**	1	**40**	1	**6**	1	**7**	1	**13**	1	**21**	1	**14**	1	**26**	1	**29**	1	**9,036**	1
LEATHER 1 COMPANY																						
Genesco 450	**538**	1	—		**(34)**	1	—		—		—		—		—		**(5)**	1	**(4)**	1	**10,000**	1
METAL PRODUCTS 21 COMPANIES																						
Gillette 137	**2,818**	1	**17**	9	**16**	14	**(90)**	16	**1**	16	**1**	16	**3**	14	**(21)**	14	**20**	6	**46**	6	**32,100**	2
Triangle Industries 144	**2,668**	2	**58**	2	**13**	15	**(65)**	14	**0**	17	**0**	17	**3**	17	—		**23**	5	**(23)**	18	**23,100**	4
Combustion Engineering 151	**2,551**	3	**(18)**	20	**51**	7	—		**2**	13	**2**	13	**7**	13	**(1)**	11	**11**	16	**3**	16	**24,149**	3
Emhart 170	**2,094**	4	**18**	8	**(10)**	18	—		—		—		—		—		**16**	13	**3**	15	**34,173**	1
Crown Cork & Seal 212	**1,619**	5	**9**	13	**79**	3	**11**	9	**5**	8	**8**	5	**14**	9	**10**	7	**17**	10	**15**	12	**12,403**	9
Stanley Works 221	**1,550**	6	**28**	3	**79**	4	**1**	12	**5**	7	**7**	7	**14**	8	**9**	8	**18**	8	**23**	9	**16,128**	6
Masco 230	**1,452**	7	**26**	5	**203**	1	**24**	6	**14**	1	**9**	3	**18**	3	**13**	5	**18**	7	**46**	7	**21,000**	5
Ball 285	**1,070**	8	**(3)**	16	**59**	6	**15**	8	**6**	6	**8**	6	**16**	7	**14**	3	**28**	3	**17**	11	**9,000**	12
Illinois Tool Works 315	**961**	9	**61**	1	**80**	2	**152**	2	**8**	3	**6**	9	**17**	6	**14**	4	**18**	9	**51**	5	**13,700**	7
Household Manufacturing 327	**910**	10	**1**	15	**(43)**	19	—		—		—		—		—		—		—		**11,000**	10
Chromalloy American 351	**813**	11	**(11)**	18	—		—		—		—		—		—		—		—		—	
Tyco Laboratories 359	**796**	12	**18**	7	**38**	9	**7**	11	**5**	9	**6**	8	**18**	2	**20**	1	**28**	2	**75**	4	**10,416**	11
Interlake 376	**736**	13	**(13)**	19	**33**	10	**16**	7	**4**	10	**5**	12	**13**	11	**(1)**	12	**17**	11	**77**	2	**7,349**	14
Masco Industries 379	**712**	14	**19**	6	**9**	16	**224**	1	**1**	14	**1**	15	**3**	15	—		—		**112**	1	**13,248**	8
Snap-on Tools 391	**670**	15	**13**	12	**65**	5	**10**	10	**10**	2	**12**	1	**17**	5	**12**	6	**15**	14	**25**	8	**6,600**	16
Hillenbrand Industries 400	**641**	16	**26**	4	**51**	8	**54**	3	**8**	4	**9**	4	**17**	4	**15**	2	**28**	1	**77**	3	**6,900**	15
Butler Manufacturing 434	**577**	17	**16**	11	**4**	17	**(66)**	15	**1**	15	**1**	14	**3**	16	**(12)**	13	**8**	17	**(5)**	17	**3,765**	20
Philips Industries 451	**538**	18	**16**	10	**30**	11	**24**	5	**6**	5	**11**	2	**19**	1	—		**25**	4	**7**	14	**7,367**	13
Foster (L.B.) 455	**532**	19	—		**(56)**	20	—		—		—		—		—		—		**(52)**	19	**4,310**	19
Stanadyne 473	**493**	20	**2**	14	**21**	12	**(31)**	13	**4**	11	**6**	11	**10**	12	**5**	9	**16**	12	**22**	10	**4,954**	17
Barnes Group 486	**440**	21	**(7)**	17	**17**	13	**37**	4	**4**	12	**6**	10	**13**	10	**4**	10	**14**	15	**14**	13	**4,697**	18
METALS 22 COMPANIES																						
LTV 49	**7,271**	1	**(11)**	18	**(3,252)**	21	—		—		—		—		—		**(18)**	18	**(76)**	19	**48,300**	1
Aluminum Co. of America 79	**4,667**	2	**(10)**	17	**254**	1	—		**5**	6	**4**	7	**7**	9	**4**	6	**6**	8	**(9)**	10	**35,700**	3
Bethlehem Steel 89	**4,333**	3	**(15)**	20	**(153)**	18	—		—		—		—		—		**(13)**	17	**(60)**	18	**37,500**	2
Reynolds Metals 109	**3,639**	4	**7**	5	**192**	2	—		**5**	7	**5**	5	**14**	3	**7**	4	**5**	9	**8**	6	**26,000**	5
Inland Steel 123	**3,276**	5	**3**	8	**19**	12	—		**1**	14	**1**	13	**2**	13	**(23)**	10	**(5)**	14	**(17)**	13	**22,668**	6
Armco 129	**3,086**	6	**(25)**	22	**(472)**	20	—		—		—		—		—		**(10)**	16	**(45)**	16	**20,900**	7
Penn Central 158	**2,388**	7	**(6)**	14	**154**	3	**39**	2	**6**	3	**5**	4	**7**	8	—		—		**6**	7	**29,938**	4
Kaiser Aluminum & Chem. 165	**2,234**	8	**(17)**	21	**(33)**	16	—		—		—		—		—		**1**	11	**(18)**	14	**13,096**	9
Alumax 180	**1,974**	9	**5**	6	**70**	5	**12**	3	**4**	9	**4**	6	**9**	6	—		—		—		**13,300**	8

THE 500 BY INDUSTRY ranked by 11 measures

RANKED WITHIN INDUSTRY

COMPANY 500 RANK	SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	SALES %	RANK	ASSETS %	RANK	EQUITY %	RANK	10-year growth rate %	RANK	10-year growth rate %	RANK	1986 %	RANK		RANK
Cyclops 233	**1,441**	10	**4**	7	**21**	11	**(19)**	5	**1**	12	**4**	9	**9**	5	**5**	5	**20**	3	**18**	2	**9,200**	11
Weirton Steel 266	**1,174**	11	**2**	9	**45**	8	**(26)**	7	**4**	8	**8**	2	**34**	1	—		—		—		**8,429**	13
NVF 279	**1,100**	12	**(14)**	19	—		—		—		—		—		—		**(20)**	19	**(80)**	20	—	
Asarco 291	**1,057**	13	**(9)**	16	**9**	13	—		**1**	13	**0**	14	**1**	14	—		**1**	12	**(19)**	15	**7,000**	14
Wheeling-Pittsburgh Steel 322	**934**	14	**37**	1	**(251)**	19	—		—		—		—		—		**(8)**	15	**(6)**	9	**6,958**	15
Cincinnati Milacron 339	**850**	15	**16**	2	**23**	10	—		**3**	10	**3**	10	**8**	7	**8**	3	**17**	5	**16**	3	**9,592**	10
Phelps Dodge 340	**846**	16	**(5)**	13	**61**	6	**108**	1	**7**	2	**3**	11	**6**	10	**(2)**	8	**(4)**	13	**(10)**	11	**8,787**	12
Newmont Mining 344	**834**	17	**14**	3	**74**	4	—		**9**	1	**4**	8	**5**	11	**3**	7	**12**	6	**33**	1	**6,600**	16
Nucor 369	**755**	18	**(0)**	11	**46**	7	**(21)**	6	**6**	4	**8**	3	**12**	4	**17**	2	**27**	1	**(14)**	12	**4,400**	20
Worthington Industries 370	**754**	19	**8**	4	**42**	9	**9**	4	**6**	5	**10**	1	**18**	2	**19**	1	**22**	2	**14**	4	**5,700**	19
Robertson (H.H.) 425	**586**	20	**(5)**	12	**(42)**	17	—		—		—		—		—		**5**	10	**(48)**	17	**6,406**	17
Handy & Harman 442	**559**	21	**0**	10	**(9)**	15	—		—		—		—		—		**18**	4	**11**	5	**5,709**	18
Carpenter Technology 461	**517**	22	**(7)**	15	**8**	14	**(69)**	8	**1**	11	**1**	12	**2**	12	**(8)**	9	**12**	7	**(4)**	8	**4,389**	21
MINING, CRUDE-OIL PRODUCTION 12 COMPANIES																						
AMAX 232	**1,444**	1	**(27)**	10	**14**	9	—		**1**	10	**0**	10	**1**	10	**(33)**	7	**(9)**	7	**(11)**	9	**21,571**	1
Union Texas 258	**1,256**	2	—		**(57)**	12	—		—		—		—		—		—		—		**1,765**	11
Inspiration Resources 280	**1,099**	3	**(2)**	6	**38**	4	—		**3**	7	**5**	4	**12**	5	—		—		**(5)**	7	**4,964**	4
Vulcan Materials 316	**958**	4	**(2)**	7	**93**	1	**31**	3	**10**	1	**11**	1	**18**	2	**10**	2	**22**	1	**40**	1	**6,307**	2
Mitchell Energy 342	**844**	5	**(8)**	8	**48**	3	**35**	1	**6**	3	**2**	7	**8**	6	**8**	3	**9**	4	**(12)**	10	**3,000**	8
Louisiana Land 348	**818**	6	**(32)**	11	**(21)**	11	—		—		—		—		—		**6**	5	**(7)**	8	**837**	12
Cyprus Minerals 354	**811**	7	**15**	1	**21**	7	—		**3**	8	**2**	8	**3**	9	—		—		**(2)**	6	**5,101**	3
Freeport-McMoRan 406	**630**	8	**(13)**	9	**26**	6	**(77)**	7	**4**	6	**1**	9	**4**	8	**(7)**	5	**15**	3	**15**	3	**4,500**	5
Westmoreland Coal 420	**599**	9	**3**	5	**13**	10	**29**	4	**2**	9	**3**	5	**7**	7	**(14)**	6	**(8)**	6	**1**	5	**2,100**	10
NERCO 422	**595**	10	**11**	2	**58**	2	**32**	2	**10**	2	**7**	2	**19**	1	—		—		**7**	4	**2,144**	9
NACCO Industries 429	**584**	11	**8**	3	**33**	5	**(1)**	5	**6**	4	**3**	6	**18**	3	**17**	1	**16**	2	**15**	2	**3,802**	6
Rochester & Pittsburgh 500	**420**	12	**4**	4	**19**	8	**(1)**	6	**4**	5	**7**	3	**12**	4	**7**	4	—		—		**3,715**	7
MOTOR VEHICLES AND PARTS 18 COMPANIES																						
General Motors 1	**102,814**	1	**7**	5	**2,945**	2	**(26)**	10	**3**	9	**4**	10	**10**	10	**(2)**	10	**6**	11	**0**	11	**876,000**	1
Ford Motor 3	**62,716**	2	**19**	3	**3,285**	1	**31**	2	**5**	4	**9**	2	**22**	2	**13**	1	**16**	5	**51**	3	**382,274**	2
Chrysler 11	**22,514**	3	**6**	8	**1,404**	3	**(14)**	8	**6**	1	**10**	1	**26**	1	**7**	4	**13**	7	**22**	7	**115,074**	3
Dana 103	**3,695**	4	**(2)**	12	**86**	5	**(48)**	12	**2**	12	**3**	11	**9**	11	**(2)**	9	**12**	9	**33**	5	**37,000**	5
Borg-Warner 110	**3,623**	5	**(9)**	15	**206**	4	**16**	3	**6**	2	**7**	3	**14**	5	**8**	3	**24**	1	**67**	2	**82,600**	4
American Motors 113	**3,463**	6	**(14)**	17	**(91)**	16	—		—		—		—		—		**(3)**	12	**5**	9	**19,517**	7
Navistar International 118	**3,357**	7	**(11)**	16	**2**	13	—		**0**	13	**0**	13	—		—		**(15)**	13	**(44)**	16	**14,997**	9
Fruehauf 143	**2,680**	8	**5**	9	—		—		—		—		—		—		—		**91**	1	**26,100**	6
PACCAR 198	**1,796**	9	**(5)**	14	**54**	6	**(26)**	9	**3**	7	**5**	7	**7**	12	**1**	8	**21**	2	**6**	8	**8,102**	13
Mack Trucks 203	**1,712**	10	**(17)**	18	**(31)**	15	—		—		—		—		—		—		**2**	10	**10,942**	11
Arvin Industries 298	**996**	11	**21**	2	**41**	8	**15**	4	**4**	6	**5**	6	**16**	4	**2**	7	**19**	3	**31**	6	**17,823**	8
Smith (A.O.) 310	**965**	12	**4**	10	**29**	9	**(30)**	11	**3**	8	**4**	9	**10**	8	**3**	6	**11**	10	**(8)**	14	**11,600**	10
Sheller-Globe 321	**940**	13	**2**	11	—		—		—		—		—		—		—		—		—	
Echlin 328	**902**	14	**17**	4	**49**	7	**7**	6	**5**	3	**7**	4	**12**	6	**9**	2	**14**	6	**40**	4	**10,900**	12
Sealed Power 392	**666**	15	**7**	6	**29**	10	**(5)**	7	**4**	5	**5**	5	**10**	7	**7**	5	**18**	4	**(2)**	12	**7,025**	14
Pullman-Peabody 432	**581**	16	**90**	1	**16**	11	**15**	5	**3**	10	**4**	8	**10**	9	—		—		**(6)**	13	**5,500**	15
Clevite Industries 484	**454**	17	**(2)**	13	**11**	12	**62**	1	**3**	11	**3**	12	**20**	3	—		—		—		**4,169**	17
Allen Group 496	**423**	18	**6**	7	**(9)**	14	—		—		—		—		—		**13**	8	**(24)**	15	**5,400**	16
PETROLEUM REFINING 32 COMPANIES																						
Exxon 2	**69,888**	1	**(19)**	11	**5,360**	1	**10**	6	**8**	1	**8**	2	**17**	2	**10**	1	**19**	4	**35**	5	**102,000**	2
Mobil 5	**44,866**	2	**(20)**	12	**1,407**	2	**35**	4	**3**	10	**4**	8	**9**	11	**4**	6	**17**	6	**42**	4	**127,400**	1
Texaco 8	**31,613**	3	**(32)**	22	**725**	5	**(41)**	10	**2**	16	**2**	13	**5**	15	**(1)**	13	**11**	14	**31**	7	**51,978**	5
Chevron 10	**24,351**	4	**(42)**	30	**715**	6	**(54)**	15	**3**	12	**2**	14	**5**	17	**(2)**	15	**15**	9	**26**	8	**51,095**	6
Amoco 13	**18,281**	5	**(33)**	24	**747**	4	**(62)**	17	**4**	8	**3**	11	**7**	13	**(0)**	12	**14**	12	**11**	9	**46,775**	7
Shell Oil 15	**16,833**	6	**(17)**	8	**883**	3	**(46)**	13	**5**	3	**3**	9	**6**	14	—		—		—		**32,641**	10
Atlantic Richfield 20	**14,586**	7	**(35)**	25	**615**	7	—		**4**	6	**3**	12	**12**	9	**3**	7	**13**	13	**1**	17	**26,600**	11
Tenneco 21	**14,558**	8	**(5)**	1	**(39)**	21	—		—		—		—		—		**8**	19	**4**	14	**101,000**	3
USX 22	**14,000**	9	**(24)**	15	**(1,833)**	32	—		—		—		—		—		**(2)**	24	**(15)**	24	**63,915**	4
Phillips Petroleum 31	**9,786**	10	**(38)**	26	**228**	9	**(45)**	11	**2**	15	**2**	15	**12**	7	**(0)**	10	**7**	21	**3**	16	**21,800**	13

THE 500 BY INDUSTRY ranked by 11 measures

RANKED WITHIN INDUSTRY

COMPANY 500 RANK	SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
									SALES		ASSETS		EQUITY		10-year growth rate		10-year growth rate		1986			
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	%	RANK	%	RANK	%	RANK	%	RANK	%	RANK	%	RANK		RANK
Sun 33	**9,376**	11	**(32)**	23	**385**	8	**(27)**	8	**4**	7	**3**	10	**7**	12	**(0)**	11	**14**	11	**11**	10	**23,645**	12
Standard Oil 35	**9,219**	12	**(29)**	19	**(345)**	27	—		—		—		—		—		**15**	10	**5**	13	**39,700**	8
Unocal 45	**7,482**	13	**(30)**	21	**176**	11	**(46)**	12	**2**	14	**2**	16	**10**	10	**(2)**	14	**10**	16	**4**	15	**18,005**	14
Ashland Oil 54	**6,991**	14	**(11)**	6	**209**	10	**42**	3	**3**	11	**5**	5	**20**	1	**6**	3	**16**	7	**55**	2	**34,400**	9
Coastal 57	**6,668**	15	**(8)**	4	**72**	13	**(50)**	14	**1**	18	**1**	18	**5**	16	**(8)**	16	**20**	3	**(9)**	20	**16,500**	16
Amerada Hess 92	**4,015**	16	**(48)**	31	**(219)**	25	—		—		—		—		—		**9**	17	**(12)**	22	**7,776**	18
Agway 112	**3,511**	17	**(14)**	7	—		—		—		—		—		—		—		—		**17,162**	15
Diamond Shamrock 130	**3,079**	18	**(25)**	17	**(116)**	23	—		—		—		—		—		**(3)**	25	**(3)**	18	**6,375**	21
Farmland Industries 142	**2,690**	19	**(38)**	27	—		—		—		—		—		—		—		—		**6,600**	20
Kerr-McGee 152	**2,535**	20	**(24)**	16	**(292)**	26	—		—		—		—		—		**1**	23	**(14)**	23	**7,373**	19
American Petrofina 182	**1,960**	21	**(19)**	10	**(25)**	20	—		—		—		—		—		**8**	18	**(5)**	19	**3,358**	27
Valero Energy 192	**1,880**	22	**(29)**	20	**(100)**	22	—		—		—		—		—		—		**(50)**	27	**2,080**	29
Pennzoil 200	**1,782**	23	**(20)**	14	**45**	16	**(60)**	16	**3**	13	**1**	17	**4**	18	**(14)**	17	**20**	2	**9**	11	**6,257**	23
Mapco 218	**1,570**	24	**(18)**	9	**74**	12	**(29)**	9	**5**	5	**5**	6	**15**	3	**1**	9	**7**	20	**59**	1	**5,105**	25
Witco 241	**1,355**	25	**(6)**	2	**65**	14	**15**	5	**5**	4	**8**	1	**14**	4	**9**	2	**22**	1	**48**	3	**8,009**	17
Murphy Oil 247	**1,313**	26	**(40)**	28	**(195)**	24	—		—		—		—		—		**16**	8	**(12)**	21	**4,012**	26
Farmers Union Central 260	**1,220**	27	**(11)**	5	—		—		—		—		—		—		—		—		**2,778**	28
Crown Central Petroleum 293	**1,052**	28	**(29)**	18	**(20)**	19	—		—		—		—		—		**4**	22	**(28)**	25	**5,691**	24
Quaker State Oil Refining 330	**899**	29	**(8)**	3	**50**	15	**10**	7	**6**	2	**8**	3	**13**	6	**6**	4	**10**	15	**6**	12	**6,345**	22
Pacific Resources 353	**811**	30	**(41)**	29	**28**	17	**53**	2	**3**	9	**6**	4	**14**	5	**3**	8	**18**	5	**33**	6	**875**	31
Tosco 362	**780**	31	**(48)**	32	**18**	18	**98**	1	**2**	17	**4**	7	**12**	8	**5**	5	**(7)**	26	**(48)**	26	**900**	30
National Coop. Refinery 378	**716**	32	**(20)**	13	—		—		—		—		—		—		—		—		**574**	32
PHARMACEUTICALS 16 COMPANIES																						
Johnson & Johnson 53	**7,003**	1	**9**	11	**330**	10	**(46)**	15	**5**	16	**6**	16	**12**	16	**5**	15	**13**	12	**27**	9	**77,057**	1
Baxter Travenol 63	**5,634**	2	**139**	1	**422**	8	**208**	2	**7**	15	**6**	15	**13**	15	**14**	3	**8**	15	**25**	13	**61,600**	2
American Home Products 74	**4,927**	3	**5**	15	**779**	1	**9**	11	**16**	2	**19**	1	**33**	4	**11**	9	**15**	11	**27**	10	**43,496**	3
Bristol-Myers 76	**4,836**	4	**9**	12	**590**	4	**11**	10	**12**	9	**14**	3	**21**	9	**13**	6	**28**	1	**28**	8	**34,900**	6
Pfizer 84	**4,476**	5	**11**	10	**660**	3	**14**	9	**15**	6	**13**	6	**19**	11	**13**	4	**19**	5	**24**	14	**40,000**	4
Merck 91	**4,129**	6	**16**	5	**676**	2	**25**	6	**16**	1	**13**	5	**26**	8	**11**	10	**17**	7	**85**	1	**30,700**	9
Abbott Laboratories 96	**3,808**	7	**13**	8	**540**	6	**16**	8	**14**	7	**14**	4	**30**	6	**19**	1	**25**	2	**36**	6	**35,754**	5
SmithKline Beckman 99	**3,745**	8	**15**	6	**521**	7	**1**	14	**14**	8	**12**	7	**40**	2	**19**	2	**21**	4	**30**	7	**33,747**	7
Lilly (Eli) 101	**3,720**	9	**14**	7	**558**	5	**8**	13	**15**	4	**12**	9	**20**	10	**11**	12	**17**	8	**37**	5	**29,100**	10
Warner-Lambert 127	**3,103**	10	**(3)**	16	**309**	11	—		**10**	13	**12**	8	**34**	3	**8**	14	**12**	13	**27**	11	**31,336**	8
Squibb 153	**2,530**	11	**24**	4	**396**	9	**75**	3	**16**	3	**16**	2	**29**	7	**12**	8	**18**	6	**45**	2	**16,915**	14
Schering-Plough 157	**2,399**	12	**24**	3	**266**	12	**38**	5	**11**	10	**9**	14	**18**	12	**4**	16	**10**	14	**39**	4	**23,500**	11
Upjohn 162	**2,280**	13	**8**	13	**253**	13	**24**	7	**11**	11	**9**	13	**17**	14	**12**	7	**21**	3	**42**	3	**20,650**	13
Sterling Drug 177	**1,990**	14	**8**	14	**172**	14	**56**	4	**9**	14	**10**	11	**18**	13	**8**	13	**16**	9	**27**	12	**22,100**	12
Rorer Group 341	**845**	15	**51**	2	**126**	15	**241**	1	**15**	5	**11**	10	**32**	5	**13**	5	**15**	10	**8**	15	**7,548**	15
Robins (A.H.) 361	**790**	16	**12**	9	**82**	16	**8**	12	**10**	12	**10**	12	**167**	1	**11**	11	**(1)**	16	**(31)**	16	**6,400**	16
PUBLISHING, PRINTING 19 COMPANIES																						
Time Inc. 98	**3,762**	1	**11**	10	**376**	2	**88**	2	**10**	5	**9**	9	**29**	4	**14**	11	**20**	15	**14**	10	**21,500**	4
Times Mirror 133	**2,920**	2	**(1)**	19	**408**	1	**72**	3	**14**	3	**14**	3	**31**	1	**20**	2	**23**	10	**13**	11	**27,941**	2
Gannett 138	**2,801**	3	**30**	1	**276**	4	**9**	9	**10**	6	**8**	12	**19**	9	**13**	13	**19**	16	**22**	6	**36,000**	1
Donnelley (R.R.) & Sons 164	**2,234**	4	**10**	14	**158**	6	**7**	10	**7**	15	**9**	8	**16**	13	**14**	12	**21**	13	**(2)**	17	**20,600**	5
Tribune 176	**2,030**	5	**5**	17	**293**	3	**136**	1	**14**	2	**11**	4	**27**	5	—		—		**4**	14	**14,000**	9
Knight-Ridder 189	**1,911**	6	**10**	11	**140**	8	**6**	12	**7**	13	**7**	16	**17**	12	**12**	15	**20**	14	**20**	7	**24,000**	3
McGraw-Hill 217	**1,577**	7	**6**	16	**154**	7	**4**	13	**10**	7	**11**	6	**18**	11	**14**	10	**25**	8	**17**	8	**15,232**	7
New York Times 219	**1,565**	8	**12**	8	**132**	9	**14**	7	**8**	10	**9**	7	**19**	10	**17**	7	**33**	2	**46**	2	**10,000**	11
Washington Post 263	**1,215**	9	**13**	6	**100**	11	**(12)**	16	**8**	11	**9**	10	**23**	7	**19**	4	**31**	5	**32**	3	**6,400**	17
Dow Jones 272	**1,135**	10	**9**	15	**183**	5	**32**	4	**16**	1	**15**	2	**25**	6	**19**	3	**25**	9	**26**	5	**7,069**	14
American Greetings 296	**1,012**	11	**10**	12	**74**	12	**0**	15	**7**	12	**9**	11	**15**	15	**16**	8	**22**	12	**(18)**	18	**20,000**	6
Harcourt Brace Jovanovich 307	**969**	12	**18**	4	**7**	18	**(85)**	18	**1**	18	**0**	18	**1**	19	**11**	16	**22**	11	**11**	12	**14,000**	8
Deluxe Check Printers 334	**867**	13	**13**	5	**121**	10	**16**	6	**14**	4	**18**	1	**29**	3	**19**	6	**32**	3	**54**	1	**13,502**	10
Macmillan 349	**818**	14	**21**	3	**60**	13	**31**	5	**7**	14	**7**	15	**20**	8	**15**	9	**31**	4	**15**	9	**8,600**	13
Media General 403	**635**	15	**10**	13	**17**	17	**(48)**	17	**3**	17	**2**	17	**5**	17	**1**	17	**19**	17	**8**	13	**7,000**	15
Harte-Hanks Communications 435	**576**	16	**5**	18	**2**	19	—		**0**	19	**0**	19	**3**	18	—		—		—		**9,750**	12
Standard Register 445	**557**	17	**26**	2	**33**	16	**3**	14	**6**	16	**8**	13	**13**	16	**30**	1	**34**	1	**4**	15	**6,674**	16

	RANKED WITHIN INDUSTRY																					
COMPANY 500 RANK	**SALES**				**NET INCOME**				**NET INCOME AS % OF**						**EARNINGS PER SHARE**		**TOTAL RETURN TO INVESTORS:**				**EMPLOYEES**	
									SALES		**ASSETS**		**EQUITY**		**10-year growth rate**		**10-year growth rate**		**1986**			
	$ Mil.	RANK	**% change from 1985**	RANK	**$ Mil.**	RANK	**% change from 1985**	RANK	**%**	RANK	**%**	RANK	**%**	RANK	**%**	RANK	**%**	RANK	**%**	RANK		RANK
Meredith 453	**533**	18	**12**	7	**47**	15	**10**	8	**9**	9	**8**	14	**16**	14	**13**	14	**30**	6	**(2)**	16	**3,306**	19
Commerce Clearing House 465	**505**	19	**11**	9	**48**	14	**6**	11	**9**	8	**11**	5	**30**	2	**19**	5	**28**	7	**26**	4	**6,297**	18
RUBBER PRODUCTS 15 COMPANIES																						
Goodyear Tire & Rubber 29	**10,328**	1	**4**	7	**124**	2	**(70)**	10	**1**	11	**1**	11	**4**	10	**(4)**	10	**13**	10	**40**	5	**121,586**	1
Firestone Tire & Rubber 102	**3,712**	2	**(3)**	12	**85**	3	**2,733**	1	**2**	8	**3**	8	**7**	9	**3**	8	**7**	14	**21**	10	**55,000**	2
GenCorp 128	**3,099**	3	**3**	9	**130**	1	**73**	3	**4**	5	**6**	5	**12**	6	**4**	6	**19**	6	**11**	12	**26,700**	3
Goodrich (B.F.) 150	**2,553**	4	**(21)**	15	**33**	6	—		**1**	10	**2**	10	**4**	11	**3**	7	**11**	13	**34**	9	**11,914**	5
Premark International 183	**1,959**	5	**11**	5	**(98)**	15	—		—		—		—		—		—		—		**21,900**	4
Dayco 326	**911**	6	**1**	10	**3**	12	**(79)**	12	**0**	13	**1**	13	**1**	13	**(18)**	12	**12**	12	**55**	3	**4,000**	15
Armstrong Rubber 357	**800**	7	**4**	8	**(38)**	14	—		—		—		—		—		**15**	9	**(10)**	13	**7,505**	6
Rubbermaid 360	**795**	8	**18**	3	**70**	4	**23**	6	**9**	2	**12**	2	**19**	3	**16**	1	**25**	4	**42**	4	**6,103**	8
Cooper Tire & Rubber 433	**578**	9	**11**	6	**23**	8	**25**	4	**4**	6	**6**	4	**12**	7	**6**	5	**26**	3	**38**	8	**5,398**	10
Dorsey 458	**527**	10	**(1)**	11	**9**	11	**(9)**	8	**2**	9	**5**	7	**12**	5	**2**	9	**18**	7	**14**	11	**4,400**	14
Danaher 460	**524**	11	**72**	1	**15**	10	**221**	2	**3**	7	**2**	9	**24**	1	—		**23**	5	**57**	2	**6,950**	7
Carlisle 479	**466**	12	**(3)**	13	**20**	9	**(18)**	9	**4**	4	**6**	6	**11**	8	**13**	3	**27**	2	**(10)**	14	**4,949**	12
Millipore 485	**443**	13	**21**	2	**39**	5	**23**	5	**9**	1	**10**	3	**13**	4	**11**	4	**12**	11	**40**	6	**4,868**	13
Standard Products 492	**433**	14	**15**	4	**27**	7	**20**	7	**6**	3	**14**	1	**23**	2	**14**	2	**32**	1	**92**	1	**5,700**	9
Lancaster Colony 495	**423**	15	**(4)**	14	**3**	13	**(76)**	11	**1**	12	**1**	12	**2**	12	**(11)**	11	**17**	8	**39**	7	**5,100**	11
SCIENTIFIC AND PHOTOGRAPHIC EQUIPMENT 17 COMPANIES																						
Eastman Kodak 26	**11,550**	1	**9**	9	**374**	3	**13**	6	**3**	12	**3**	15	**6**	14	**(5)**	14	**7**	14	**42**	6	**121,450**	1
Xerox 32	**9,377**	2	**5**	11	**465**	2	**(2)**	10	**5**	8	**4**	10	**10**	10	**(1)**	13	**6**	15	**6**	11	**100,367**	2
Minnesota Mining & Mfg. 39	**8,602**	3	**10**	8	**779**	1	**17**	5	**9**	4	**11**	2	**17**	3	**9**	8	**12**	9	**34**	7	**81,847**	3
Lear Siegler 156	**2,464**	4	**4**	12	**56**	9	**(45)**	13	**2**	15	**4**	12	**9**	11	**6**	9	**26**	1	**94**	2	**29,091**	4
Polaroid 211	**1,629**	5	**26**	2	**104**	5	**180**	1	**6**	6	**7**	7	**10**	8	**3**	10	**9**	12	**56**	5	**14,765**	9
General Signal 214	**1,583**	6	**(12)**	17	**75**	7	**51**	2	**5**	9	**5**	9	**8**	12	**3**	11	**9**	11	**(1)**	12	**20,180**	6
Tektronix 242	**1,352**	7	**(6)**	16	**39**	12	**(56)**	15	**3**	14	**3**	13	**5**	15	**1**	12	**9**	13	**23**	9	**19,251**	8
Becton Dickinson 248	**1,312**	8	**15**	5	**122**	4	**39**	3	**9**	3	**7**	5	**15**	6	**10**	6	**14**	8	**64**	4	**19,300**	7
Perkin-Elmer 251	**1,291**	9	**(1)**	14	**73**	8	**(12)**	11	**6**	7	**5**	8	**10**	9	**11**	5	**11**	10	**(16)**	15	**14,581**	10
EG&G 270	**1,145**	10	**(1)**	13	**45**	11	**(19)**	12	**4**	10	**10**	3	**19**	2	**17**	1	**23**	4	**(25)**	16	**23,000**	5
Bell & Howell 338	**853**	11	**12**	7	**33**	14	**2**	9	**4**	11	**4**	11	**12**	7	**16**	3	**15**	7	**21**	10	**11,717**	11
Bausch & Lomb 384	**699**	12	**17**	4	**75**	6	**12**	7	**11**	1	**8**	4	**15**	5	**14**	4	**22**	5	**24**	8	**7,976**	12
Ametek 440	**568**	13	**13**	6	**37**	13	**5**	8	**6**	5	**7**	6	**16**	4	**9**	7	**18**	6	**(4)**	13	**6,291**	16
CooperVision 441	**560**	14	**69**	1	**9**	17	**(74)**	16	**2**	17	**1**	17	**4**	16	—		—		**(35)**	17	**5,740**	17
Bard (C.R.) 448	**548**	15	**18**	3	**51**	10	**22**	4	**9**	2	**12**	1	**19**	1	**17**	2	**24**	3	**67**	3	**7,200**	15
Foxboro 449	**544**	16	**(5)**	15	**9**	16	—		**2**	16	**2**	16	**3**	17	**(11)**	15	**4**	16	**(8)**	14	**7,850**	13
Robertshaw Controls 490	**436**	17	**6**	10	**13**	15	**(46)**	14	**3**	13	**3**	14	**8**	13	—		**25**	2	**119**	1	**7,609**	14
SOAPS, COSMETICS 10 COMPANIES																						
Colgate-Palmolive 71	**4,985**	1	**(1)**	8	**177**	1	**62**	2	**4**	6	**6**	6	**18**	3	**3**	6	**10**	6	**29**	3	**37,900**	1
Chesebrough-Pond's 126	**3,121**	2	**6**	6	—		—		—		—		—		—		**16**	4	**76**	1	—	
Avon Products 135	**2,883**	3	**(5)**	9	**159**	2	—		**6**	4	**7**	5	**23**	1	**(3)**	7	**1**	9	**4**	8	**35,200**	2
Lever Brothers 155	**2,475**	4	**18**	3	**(19)**	8	—		—		—		—		—		—		—		**5,221**	4
Revlon Group 209	**1,650**	5	**(33)**	10	—		—		—		—		—		—		**8**	8	**17**	5	—	
Clorox 282	**1,089**	6	**3**	7	**96**	3	**11**	5	**9**	2	**11**	3	**17**	4	**11**	3	**21**	3	**9**	7	**5,100**	5
Economics Laboratory 352	**813**	7	**12**	5	**44**	5	**11**	6	**5**	5	**9**	4	**17**	5	**8**	5	**11**	5	**14**	6	**7,339**	3
Int'l Flavors & Fragrances 412	**621**	8	**24**	1	**86**	4	**23**	3	**14**	1	**13**	2	**16**	6	**8**	4	**9**	7	**(4)**	9	**3,807**	7
Alberto-Culver 487	**439**	9	**19**	2	**9**	7	**318**	1	**2**	7	**4**	7	**7**	7	**16**	1	**26**	2	**25**	4	**4,200**	6
Noxell 488	**439**	10	**15**	4	**37**	6	**15**	4	**8**	3	**15**	1	**21**	2	**16**	2	**28**	1	**44**	2	**1,630**	8
TEXTILES 11 COMPANIES																						
Burlington Industries 140	**2,778**	1	**(1)**	10	**57**	3	**350**	1	**2**	8	**3**	8	**5**	9	**(6)**	9	**11**	9	**36**	6	**43,000**	1
Armstrong World Industries 187	**1,920**	2	**14**	4	**122**	1	**21**	6	**6**	2	**9**	3	**15**	4	**7**	5	**14**	8	**37**	5	**21,667**	6
West Point-Pepperell 195	**1,813**	3	**51**	2	**54**	4	**92**	3	**3**	6	**4**	6	**8**	6	**4**	6	**17**	6	**26**	8	**32,200**	2
Stevens (J.P.) 208	**1,672**	4	**(10)**	11	**54**	5	—		**3**	5	**6**	5	**11**	5	**0**	8	**16**	7	**27**	7	**22,800**	5
Springs Industries 225	**1,505**	5	**48**	3	**33**	7	**145**	2	**2**	7	**3**	7	**7**	7	**8**	4	**21**	5	**16**	9	**23,500**	3
DWG 268	**1,162**	6	**11**	6	**(9)**	10	—		—		—		—		—		**8**	10	**47**	4	**15,900**	7
Collins & Aikman 278	**1,101**	7	**6**	8	**66**	2	**6**	7	**6**	3	**11**	2	**19**	1	**14**	3	**30**	2	**69**	2	**11,700**	8

THE 500 BY INDUSTRY ranked by 11 measures

	RANKED WITHIN INDUSTRY																					
COMPANY 500 RANK	SALES				NET INCOME				NET INCOME AS % OF						EARNINGS PER SHARE		TOTAL RETURN TO INVESTORS:				EMPLOYEES	
									SALES		ASSETS		EQUITY		10-year growth rate		10-year growth rate		1986			
	$ Mil.	RANK	% change from 1985	RANK	$ Mil.	RANK	% change from 1985	RANK	%	RANK	%	RANK	%	RANK	%	RANK	%	RANK	%	RANK		RANK
Fieldcrest Cannon 284	**1,083**	8	**85**	1	**17**	9	**33**	5	**2**	9	**2**	9	**6**	8	**2**	7	**21**	4	**95**	1	**23,207**	4
United Merchants & Mfrs. 356	**802**	9	**1**	9	**(35)**	11	—		—		—		—		—		**2**	11	**(28)**	11	**9,850**	10
Shaw Industries 447	**550**	10	**6**	7	**24**	8	**(7)**	8	**4**	4	**9**	4	**17**	3	**16**	2	**26**	3	**59**	3	**5,500**	11
Russell 489	**438**	11	**14**	5	**43**	6	**46**	4	**10**	1	**12**	1	**17**	2	**19**	1	**31**	1	**(7)**	10	**10,040**	9
TOBACCO 4 COMPANIES																						
Philip Morris 12	**20,681**	1	**70**	1	**1,478**	1	**18**	1	**7**	2	**8**	2	**26**	2	**19**	1	**21**	3	**69**	1	**111,000**	2
RJR Nabisco 14	**16,998**	2	**26**	2	**1,064**	2	**6**	3	**6**	4	**6**	4	**18**	3	**10**	4	**21**	4	**62**	2	**124,617**	1
American Brands 68	**5,261**	3	**12**	3	**365**	3	**(13)**	4	**7**	3	**7**	3	**14**	4	**11**	3	**22**	2	**35**	3	**80,729**	3
United States Tobacco 463	**512**	4	**7**	4	**104**	4	**11**	2	**20**	1	**20**	1	**28**	1	**17**	2	**24**	1	**34**	4	**3,456**	4
TOYS, SPORTING GOODS 5 COMPANIES																						
Hasbro 243	**1,330**	1	**9**	1	**99**	1	**0**	2	**7**	1	**10**	1	**17**	1	**32**	1	**48**	1	**13**	2	**7,400**	3
Minstar 269	**1,156**	2	**(8)**	3	**1**	3	**(98)**	3	**0**	3	**0**	3	**0**	3	**(20)**	2	**19**	2	**(1)**	3	**10,000**	2
Mattel 289	**1,059**	3	**1**	2	**(1)**	4	—		—		—		—		—		**5**	4	**(33)**	4	**19,000**	1
Kenner Parker Toys 467	**503**	4	**(21)**	4	**25**	2	**272**	1	**5**	2	**6**	2	**12**	2	—		—		**17**	1	**2,900**	5
Coleco Industries 469	**501**	5	**(35)**	5	**(111)**	5	—		—		—		—		—		**12**	3	**(48)**	5	**3,800**	4
TRANSPORTATION EQUIPMENT 3 COMPANIES																						
Fleetwood Enterprises 261	**1,218**	1	**(5)**	2	**39**	2	**(27)**	2	**3**	2	**9**	1	**14**	1	**14**	1	**14**	4	**6**	3	**10,000**	2
Harsco 274	**1,130**	2	**(10)**	4	**46**	1	**(23)**	1	**4**	1	**6**	2	**10**	2	**2**	2	**18**	2	**16**	1	**10,800**	1
International Controls 329	**902**	3	**536**	1	**(7)**	4	—		—		—		—		—		**36**	1	**(23)**	4	**5,864**	3

FOOTNOTES TO THE 500

¶ Includes sales from discontinued operations of at least 10%; see the explanation of "sales" on page 410.

● Indicates that a corporation was not among the 500 in 1985.

N.A. Not available.

* Does not include excise taxes; see the explanation of "sales" on page 410.

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 410.

‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 410.

§ Dividends paid by company on its mandatory redeemable preferred stock were subtracted from net income in calculating this figure.

1

[1] Figures include General Foods (1985 rank: 38) acquired November 1, 1985.

[2] Name changed from R.J. Reynolds Industries April 25, 1986.

[3] Wholly owned by Royal Dutch/Shell Group (1985 International 500 rank: 1).

[4] Figures include Richardson-Vicks (1985 rank: 271) acquired November 13, 1985.

[5] Figures are for fiscal year ended June 30, 1986.

[6] Name changed from U.S. Steel July 8, 1986. Figures include Texas Oil & Gas acquired February 11, 1986.

[7] Figures are for fiscal year ended September 30, 1986.

[8] Figures include Sanders Associates (1985 rank: 341) acquired August 13, 1986.

[9] Financial subsidiaries would add 25% or more to sales if consolidated.

10

[10] Figures include MEI (1985 rank: 358) acquired May 30, 1986.

[11] Spun off Premark International October 31, 1986. Name changed from Dart & Kraft November 21, 1986.

[12] Company was formed by the merger of Sperry (1985 rank: 65) and Burroughs (1985 rank: 72) September 16, 1986.

[13] Name changed from Caterpillar Tractor May 22, 1986.

[14] Figures are for fiscal year ended October 31, 1986.

[15] Figures are for fiscal year ended May 31, 1986.

[16] Figures include Hammermill Paper (1985 rank: 199) acquired September 7, 1986.

[17] Figures include Ex-Cell-O (1985 rank: 287) acquired September 17, 1986.

[18] Figures are for fiscal year ended July 31, 1986.

[19] Figures are for fiscal year ended April 30, 1986.

20

[20] Figures include SCM (1985 rank: 172) acquired March 31, 1986.

[21] Figures include Miles Laboratories (1985 rank: 279) and Mobay (1985 rank: 227) consolidated July 1, 1986.

[22] Name changed from International Harvester February 20, 1986.

[23] FORTUNE estimate.

[24] Figures are for fiscal year ended November 30, 1986.

[25] Figures are for fiscal year ended August 31, 1986.

[26] Figures include Crown Zellerbach (1985 rank: 128) acquired May 1, 1986.

[27] Figures are for fiscal year ended February 28, 1986.

[28] Acquired by AMAX (rank: 232) November 24, 1986.

[29] Name changed from Knight-Ridder Newspapers May 1, 1986.

30

[30] Figures include Magic Chef (1985 rank: 297) acquired May 30, 1986.

[31] Figures include Cluett Peabody (1985 rank: 314) acquired January 15, 1986.

[32] Wholly owned by Seagram (1985 International 500 rank: 250).

[33] Figures are for fiscal year ended January 31, 1986.

[34] Name changed from Libbey-Owens-Ford August 1, 1986.

[35] Name changed to Fruit of the Loom February 26, 1987.

[36] Wholly owned by Unilever (1985 International 500 rank: 6).

[37] Figures are for fiscal year ended March 31, 1986.

[38] Name changed from Figgie International Holdings December 31, 1986.

[39] Name changed to DAY International February 27, 1987.

40

[40] Wholly owned by Household International (1985 Service 500 rank: R11).

[41] Name changed from Harnischfeger to Harnischfeger Industries October 24, 1986.

[42] FORTUNE estimate. Acquired by Sun Chemical December 23, 1986.

[43] Figures include Harris Graphics (1985 rank: 468) acquired June 24, 1986.

[44] Reorganization of North American Coal effective June 6, 1986.

[45] Name changed from Harvey Hubbell May 5, 1986.

NOTES TO THE 500

SALES

All companies on the list must have derived more than 50% of their sales from manufacturing and/or mining. Sales include rental and other revenues but exclude dividends, interest, and other nonoperating revenues. Sales of subsidiaries are included if they are consolidated. Sales from discontinued operations are included if these figures are published. If the sales are at least 10% higher for this reason, there is a symbol (¶) next to the sales figure. All figures are for the year ending December 31, 1986, unless otherwise noted. Sales figures do not include excise taxes collected by the manufacturer, and so the figures for some corporations—most of which sell gasoline, liquor, or tobacco—may be lower than those published by the corporations themselves. If they are at least 5% lower for this reason, there is an asterisk (*) next to the sales figures.

NET INCOME

Net income is shown after taxes and after extraordinary credits or charges if any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Cooperatives provide only "net margin" figures, which are not comparable with the net income figures in these listings, and therefore N.A. is shown in that column. Figures in parentheses indicate a loss.

ASSETS

Assets shown are those at the company's fiscal year-end.

STOCKHOLDERS' EQUITY

Stockholders' equity is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded if its redemption is either mandatory or outside the control of the company, except in the case of cooperatives. For purposes of calculating "net income as percent of stockholders' equity," any dividends paid on redeemable preferred stock, if that stock's redemption is either mandatory or outside the control of the company, have been subtracted from the net income figure.

MARKET VALUE

The figure shown represents the most recent number of common shares outstanding multiplied by the price per common share as of March 13, 1987.

EARNINGS PER SHARE

For all companies the figures shown are the primary earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common stock equivalents outstanding during the year. Per-share earnings for 1985 and 1976 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1976. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Results are listed as not available (N.A.) if the companies are cooperatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published in 1976. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1976 or 1986.

TOTAL RETURN TO INVESTORS

Total return to investors includes both price appreciation and dividend yield to an investor in the company's stock. The figures shown assume sales at the end of 1986 of stock owned at the end of 1976 and 1985. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spinoffs were reinvested when they were paid. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) if shares are not publicly traded or are traded on only a limited basis. If companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded.

INDUSTRY CODE

Industry code numbers used in the directory indicate which industry represents the greatest volume of industrial sales for each company. The numbers refer to the industry groups below, which are based on categories established by the U.S. Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office in the Standard Industrial Classification manual. They are the same industry groups as those shown in the tables beginning on page 390. The median figures in the tables refer only to results of companies in the 500; no attempt has been made to calculate medians in groups with fewer than four companies.

10	Mining, crude-oil production
20	Food
21	Tobacco
22	Textiles
23	Apparel
25	Furniture
26	Forest products
27	Publishing, printing
28	Chemicals
29	Petroleum refining
30	Rubber products
31	Leather
32	Building materials
33	Metals
34	Metal products
36	Electronics
37	Transportation equipment
38	Scientific and photographic equipment
40	Motor vehicles and parts
41	Aerospace
42	Pharmaceuticals
43	Soaps, cosmetics
44	Computers (includes office equipment)
45	Industrial and farm equipment
46	Jewelry, silverware
47	Toys, sporting goods
49	Beverages

Most of the figures in this FORTUNE 500 Directory were prepared by Julianne Slovak and Stephen Madden, who are responsible for the columns reporting on companies' sales, assets, net income, stockholders' equity, and the industry code numbers. Figures on market value, earnings per share, and total return to investors were prepared by Claudine Knight.

ALPHABETICAL INDEX TO THE 500

COMPANY	SALES RANK
A	
AM International	390
AMAX	232
AMP	185
ATCOR	483
Abbott Laboratories	96
Advanced Micro Devices	436
Ag Processing	408
Agway	112
Air Products & Chemicals	179
Alberto-Culver	487
Allegheny International	186
Allen Group	496
Allied Products	498
Allied-Signal	25
Allis-Chalmers	363
Alumax	180
Aluminum Co. of America	79
Amalgamated Sugar	472
Amdahl	372
Amerada Hess	92
American Brands	68
American Cyanamid	94
American Greetings	296
American Hoechst	210
American Home Products	74
American Maize-Products	464
American Motors	113
American Petrofina	182
American Standard	121
American Tel. & Tel.	7
Ametek	440
Amoco	13
Amstar	245
Anchor Glass Container	424
Anchor Hocking	367
Anderson Clayton	292
Anheuser-Busch	43
Apple Computer	190
Archer Daniels Midland	67
Armco	129
Armstrong Rubber	357
Armstrong World Industries	187
Arvin Industries	298
Asarco	291
Ashland Oil	54
Atlantic Richfield	20
Avery International	273
Avon Products	135
B	
BASF	106
Bairnco	428
Baker International	220
Ball	285
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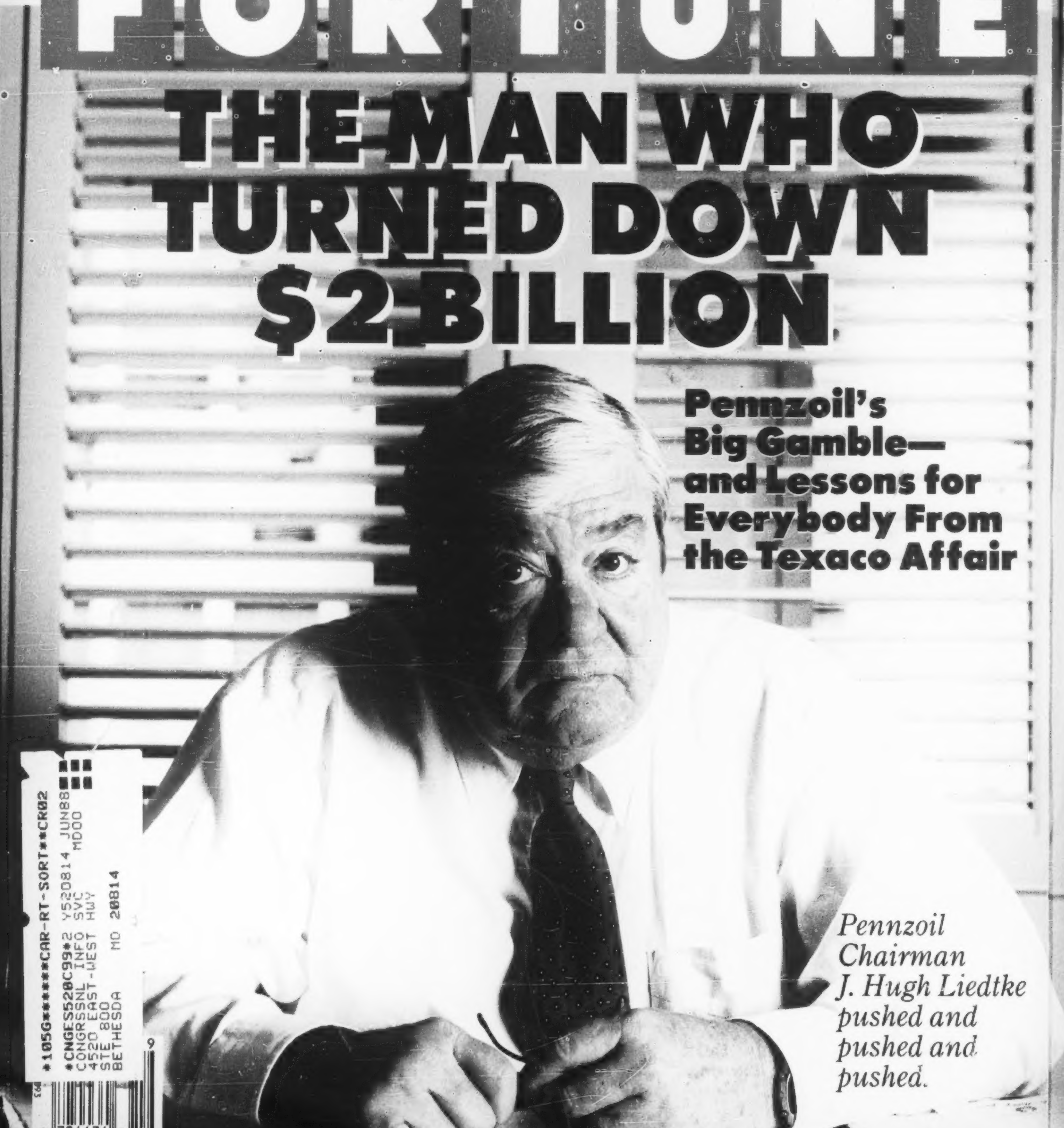

THE MAN WHO TURNED DOWN $2 BILLION

Pennzoil's Big Gamble—and Lessons for Everybody From the Texaco Affair

Pennzoil Chairman J. Hugh Liedtke pushed and pushed and pushed.

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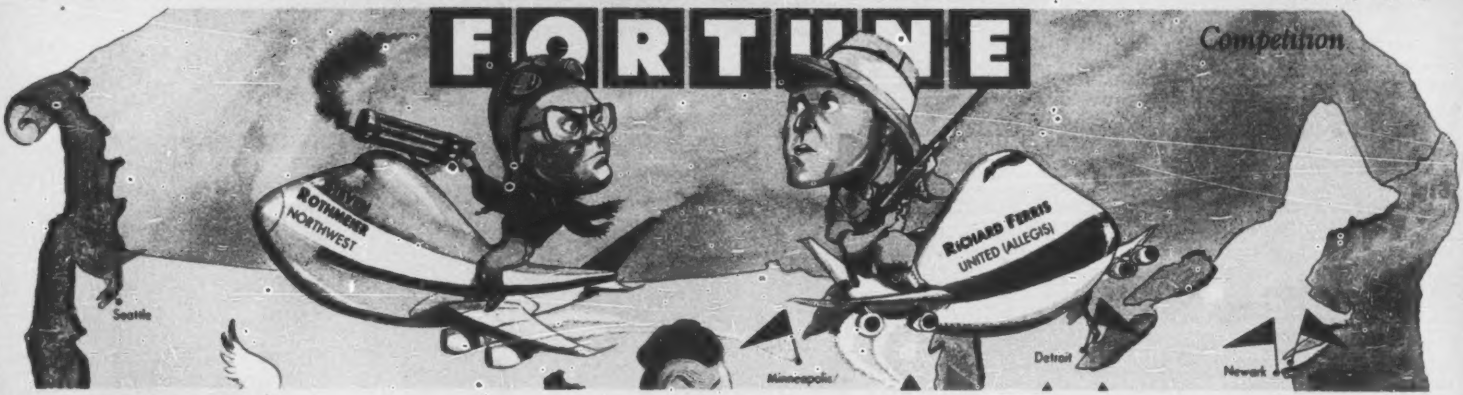

George Lange photographed the Pennzoil chairman at the Waldorf Towers in Manhattan. See page 50.

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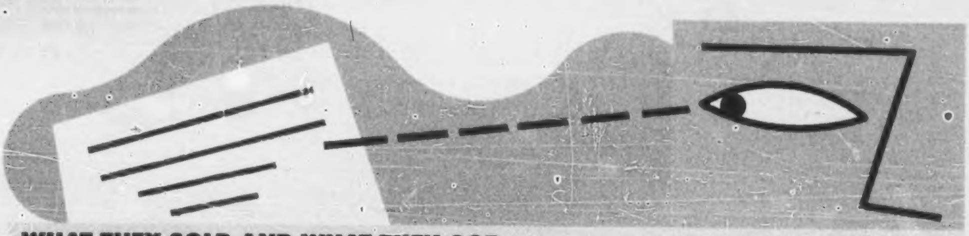

WHAT THEY SOLD AND WHAT THEY GOT

NAME	CLIENT	SERVICE RENDERED	FEE	STATUS
Sgt. Clayton John Lonetree	**Soviet Union**	Allegedly sold information about U.S. undercover agents in Moscow, 1985-1986	**$3,500** and sex	Charged with espionage
Richard W. Miller	**Soviet Union**	Turned over FBI documents, 1984	Sex and a promise of **$65,000**	Serving a life sentence
Ronald Pelton	**Soviet Union**	Turned over information on U.S. intelligence gathering, 1980-1985	**$35,000**	Serving a life sentence
Jonathan Jay Pollard	**Israel**	Turned over classified documents including U.S. ship locations, 1984-1985	**$45,000**	Serving a life sentence
John A. Walker Jr. **Arthur J. Walker** **Michael L. Walker** **Jerry A. Whitworth**	**Soviet Union**	Turned over military documents including Navy cryptographic data, 1968-1985	**$1 million**	Serving jail terms from 25 years to 365 years

ANDERS WENNGREN

■ Think you can make a quick buck selling secrets to the Russians? Think again. Judging from those spies who have been caught, the espionage game pays rather poorly and the penalties can be stiff (see chart).

If the embassy security cases in Moscow and Leningrad are any indication, the spy profession has reached new lows. The principal remuneration the Marines allegedly got was what economists call imputed income, in this case sex with Soviet agents. Marine Sergeant Clayton John Lonetree reportedly received sex and just $3,500 for turning over names of U.S. undercover agents, among other data. However, formal charges against Lonetree do not say he received money for the information, and prosecutors are having trouble gathering evidence.

"The Soviets are notorious for being poor payers," says Phillip Knightley, a British spy sage who recently published *The Second Oldest Profession: Spies and Spying in the Twentieth Century.* He reckons that probably no U.S. document is worth millions to the Soviets. But an agent in the inner sanctum is another matter. Says Knightley: "A mole in the National Security Council could probably get $100,000 a month."

While the U.S. most likely follows much the same pay scale as the Soviets, at least it can lure a Russian spy with the prospect of a rich life in the West after the goods are delivered. The CIA reportedly has already paid former Russian diplomat Arkady Shevchenko more than $400,000 for spying for the U.S. from 1976 to 1978, when he defected. Since then Shevchenko made $150,000 writing a book, sold the book's film rights for $450,000, and gives lectures for up to $12,000 an appearance.

No need for want ads at the White House

■ The post-Irangate departures of high-level officials such as Deputy Treasury Secretary Richard Darman and Navy Secretary John Lehman raise fears of a President bereft of his best and brightest. Not to worry. Says presidential personnel director Robert Tuttle: "People still want to serve this President."

Ironically, the Iran-contra scandal has helped White House recruitment efforts, though jobs often go begging at the end of a two-term presidency. With his Administration threatened, Ronald Reagan was able to attract a fresh team led by chief of staff Howard Baker. Outside the White House, the Administration has mostly filled high-level vacancies from within. Replacing Darman is M. Peter McPherson, a former administrator of the Agency for International Development. Taking CIA director William Casey's place is former FBI director William Webster. About a dozen candidates are vying for the FBI job.

Secretary of the Navy Lehman's successor is assistant secretary for reserve affairs James H. Webb, a Marine combat officer who has written best-selling books on Vietnam. Replacing assistant secretary for international security policy Richard Perle is fellow hard-liner Frank Gaffney Jr., a top Pentagon official.

Openings are hotly contested on independent commissions, where terms will extend beyond November 1988. Currently, a battle rages for the chairmanship of the Securities and Exchange Commission, vacated by John Shad, who has been nominated ambassador to the Netherlands. Among the contestants are Tuttle; Arthur Levitt Jr., chairman of the American Stock Exchange; U.S. District Court Judge Kevin Duffy; and Edward Fleischman and Charles Cox, both Republican members of the commission.

Tuttle, the longest-serving White House personnel chief, needs no résumés.

KARL SCHUMACHER

Getting ready for Mike Wallace

■ Is there anything Americans can teach the Japanese? Yes. How to deal with the probing, irreverent U.S. media. Japanese

PROTECTIONISM CAN'T PROTECT JOBS

At least not without doing much more harm than good. In any case it is not needed. Despite the flood of imports, the U.S. is producing plenty of high-paying new jobs. ■ *by Michael McFadden*

IT IS axiomatic among protectionists that imports are wiping out the best red-blooded, high-paying U.S. manufacturing jobs and leaving the displaced workers to scrounge for a living as hamburger flippers. The protectionists make their case with a mixture of haunting portraiture—idled auto plants, shuttered steel mills, distraught ex-workers—and carefully selected statistics. The only answer, they say, is to get tough with our trading partners.

REPORTER ASSOCIATE *Cynthia Hutton*

But is it? While imports have shot up some 50% since 1981, the U.S. has generated 7.6 million new jobs. Far more of them have been high paying than low paying (see table). Meantime, protectionist measures designed to help such industries as textiles, steel, and autos have not kept employment in them from shrinking drastically.

The protectionist point of view enjoys the support of powerful constituencies, including labor unions, whose ranks have thinned in recent years, manufacturers who would rather bleat than fight, and Democrats looking for campaign issues. Missouri Representative Richard Gephardt, a candidate for the 1988 presidential election, is sponsoring an amendment that would require the President to impose trade restrictions on countries that run sizable trade surpluses with the U.S. helped by unfair trade practices.

Powerful constituencies, however, cannot

KEN KOBRE

Quotas help preserve *the jobs of steelworkers like this Bethlehem employee, but only at an estimated annual cost of $750,000 per job.*

turn myth into fact. Yes, U.S. manufacturing employment has dropped some 9% from its 1979 peak. Visible pockets of pain remain as industry continues to restructure.

Some foreign manufacturers are getting special help from their governments—European steelmakers, for instance, are abetted by direct subsidies, import controls, and production quotas. Others enjoy markedly lower wage rates (though the strengthening yen has now lifted total compensation in Japanese manufacturing practically to U.S. levels). And until recently, the strong dollar penalized U.S. exports. But smokestack America's trade woes are due mainly to such old self-inflicted injuries as bloated payrolls, rigid union work rules, and indifferent management.

The protectionists got a big boost from a study published in December by the Joint Economic Committee. Produced by economists Barry Bluestone of the University of Massachusetts and Bennett Harrison of MIT, the JEC study contended that 58% of the eight million new jobs the U.S. economy created between 1979 and 1984 paid less than $7,000 a year, measured in 1984 dollars. It also made the dramatic assertion that the American middle class is shrinking.

The JEC study poured a few drops of new wine into an old bottle. A small group of economists have been advancing the argument of the disappearing middle class for several years, starting in the early 1980s when recession was playing havoc with employment and income growth. Every such claim has evaporated when put to rigorous examination, and the Bluestone-Harrison thesis is proving no exception.

FOR ONE THING, says Bruce Bartlett, a senior fellow at the Heritage Foundation, a conservative Washington research group, the study erroneously lumps full-time and part-time workers together to create the impression that job growth is occurring only in the low-paid categories. Of the 4.6 million jobs created between 1979 and 1984 that paid less than $7,000 a year, 1.7 million were part time. Excluding part-timers in all categories, Bartlett says, the proportion of low-paying jobs falls sharply, from 58% to 22% of the total. Does the surge of part-time work suggest an inadequacy in the U.S. job-creating mechanism? No, according to economists at the Bureau of Labor Statistics. Last year, for example, about 75% of part-time workers—many of them teenagers and retired people—were seeking part-time jobs.

Economists also fault the time periods used in the JEC study. Bluestone and Harrison compare job growth in 1979, a year when the economy had reached a cyclical peak, with job growth in 1984, when it was still recovering from the brutal 1981-82 recession. Bluestone and Harrison have since updated their figures; the 1985 data, they say, show that 44% of the new jobs since 1979 were in the low-wage category. Nonetheless, an examination of wage distribution among U.S. jobs over the past ten years shows that it is about the same as it was a decade ago.

The ten-year figures, moreover, mask a powerful shift in the kinds of jobs being created these days. Earnings classifications developed in the JEC study, updated in 1985 dollars, define low-paying jobs as those that

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THE PRICE OF PROTECTIONISM

INDUSTRY	TOTAL COSTS TO CONSUMERS 1984 in millions	NUMBER OF JOBS SAVED	COST PER JOB SAVED
Textiles and apparel	$27,000	640,000	$42,000
Carbon steel	$6,800	9,000	$750,000
Autos	$5,800	55,000	$105,000
Dairy products	$5,500	25,000	$220,000
Shipping	$3,000	11,000	$270,000
Meat	$1,800	11,000	$160,000

Quotas and other measures saved an estimated 751,000 jobs in these industries but are costing U.S. consumers $49.9 billion a year, according to economists Gary Hufbauer and Howard Rosen.

pay under $7,263, middle-pay jobs as $7,263 to $29,048, and high-pay as everything above. Using those classifications, high-paying new jobs increased 43% from 1981 to 1985 while low-paying jobs rose 25%; those in the middle increased 31%. As a result, high-paying jobs jumped from 14% of all jobs in 1981 to 16% in 1985. Low-end jobs fell from 33% to 31%, while the middle remained about the same. There is some evidence that the proportion of lower-paying jobs within each wage category has increased. But this trend appears partly due to baby-boomers taking jobs for the first time, and an increasing number of women entering the work force. Wages within each category should rise as the inexperienced workers advance.

Most of the new job growth has come in the service sector, which protectionists characterize as a sinkhole of dead-end jobs. Among the fields of growth: health care, law, and computer services. Pay levels seem likely to keep rising in services. Labor Secretary William Brock warns that the U.S. is heading for a critical shortage of skilled mechanics, teachers, nurses, and paralegals in years to come. At the same time, manufacturing is starting to generate a trickle of new jobs. Latest BLS data show that manufacturing employment rebounded to a seasonally adjusted 19.2 million at the end of last year, up 6.7% from its low of 18 million in December 1982. It is unlikely that the number will soon approach the June 1979 peak of 21.2 million,

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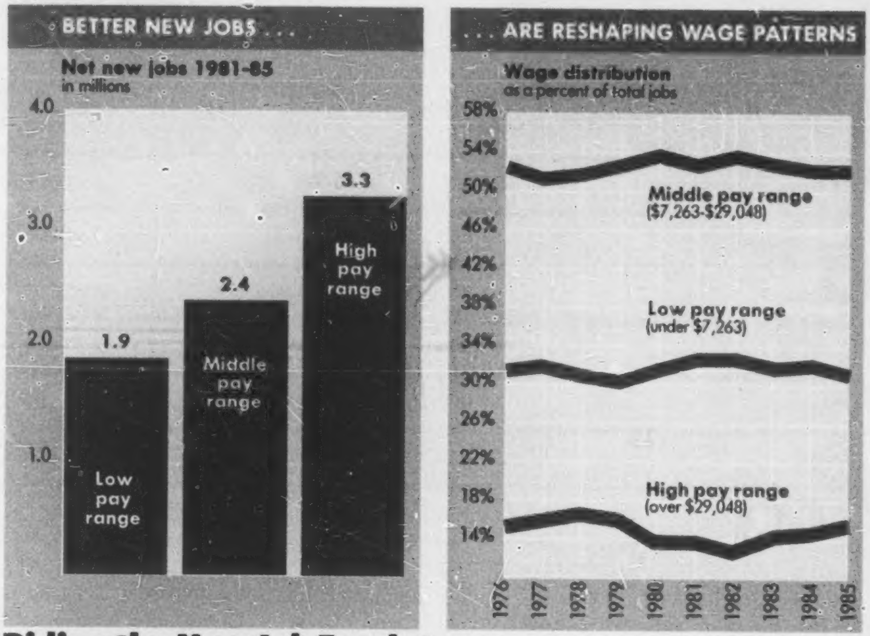

Riding the New Job Escalator

The high-paying new jobs the U.S. has created in recent years, virtually all in service industries, are pushing the wage distribution for all jobs higher. Low-range jobs are falling as a percent of the total.

but this does not mean that the U.S. industrial base is crumbling. Manufactured products continue to account for a solid 20% of GNP—just as they have for the past four decades—and rising output in the years to come will continue to add jobs.

Unquestionably, some or many of the workers who left manufacturing jobs for service jobs took pay cuts, though often they were victims of their unions' success in winning pay scales far out of line with productivity increases. Manufacturing wages averaged $396.01 a week in 1986, vs. an average service wage of $265.20. But in part the difference reflects the wage structures of mature manufacturing industries vs. younger service industries, as well as the relative youth of many service workers.

Wages alone aren't enough to tell if Americans are prospering. Richard McKenzie, an economist at Clemson University and a specialist in industrial labor policy issues, says personal income is a better measure, since it includes supplemental income such as pension payments, worker's compensation, and Social Security. Today such income equals 20.5% of an average worker's wages, up from 14.7% in 1973. The rise has helped boost personal income, measured in 1986 dollars, 12% since 1973 to $14,500.

In short, the numbers make it clear that the U.S. job-creating machine needs no protective tinkering. Other evidence suggests that protectionist measures adopted to date have not only saved far fewer jobs than they were supposed to but have also imposed economic costs so high that the measures may well destroy more jobs in the long run than they have saved.

Trade protection first hits the consumer's pocketbook. According to Gary Hufbauer, a professor of finance at Georgetown University and an international trade expert, quotas and tariffs cost U.S. consumers a walloping $66 billion in 1986. Hufbauer and Howard Rosen, a research associate at the Institute for International Economics in Washington, also calculate that American consumers are subsidizing jobs in industries like auto, steel, and textiles at costs ranging from $50,000 to $150,000 per job saved. Consumers spend $27 billion on textile and apparel subsidies alone. That works out to $42,000 per job in an industry with an average wage of $12,000. U.S. taxpayers would come out ahead by granting most of the workers whose jobs they are saving early retirement at full pay. These costs also add to the burdens of manufacturers hoping to compete with low-priced imports—expensive steel, for example, drives up the cost of building cars in Detroit.

It is difficult to credit protectionism with saving many jobs in any case. The so-called voluntary restraint agreements limiting the

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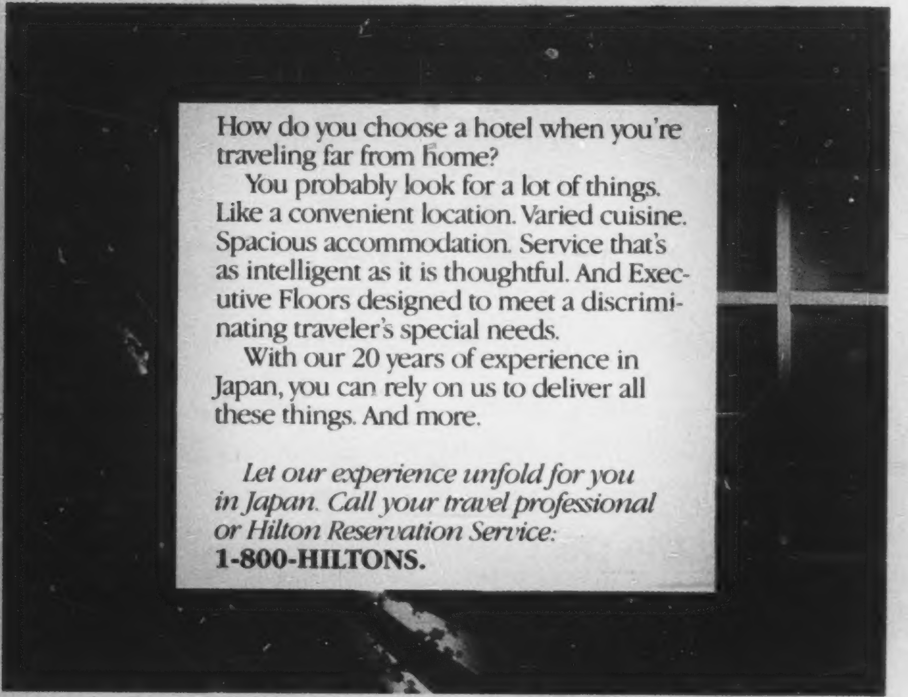

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number of Japanese cars sold in the U.S. were meant to give Detroit time to become competitive with the Japanese. But in order to compete, U.S. carmakers have shed over 130,000 jobs since 1978, and the process is still not complete.

PROTECTIONISTS argue that the quotas reduced the pain of readjustment by letting automakers earn enough profits to preserve some jobs and help displaced workers find new ones. But quotas can be addictive, allowing industries to put off hard choices they must make to become fully competitive. Despite the soaring yen, which has driven up the prices of Japanese autos in the U.S. by some 10% so far, Detroit still insists it needs protection. In January, Japan agreed to extend restraints for a seventh year.

A long history of protection has not kept the textile industry from losing jobs either. In the decade after the U.S. signed a multilateral restraint agreement in 1962, employment in the textile and apparel industry rose 9%. But the aggregate figures hid massive job losses in the Northeast as textile manufacturers reduced labor costs by moving south and west. Between 1960 and 1970, textile employment in New England declined 34%, while increasing 19% in the South. Then between 1973 and 1984, as the industry increasingly automated, total employment fell 28% to 722,000—20% below its 1961 level.

If Congress does pass protectionist legislation, the U.S. should expect its trading partners to pay it back in kind. Using 1984 data, Lester Davis, an economist specializing in international trade at the Commerce Department, estimates that every $1 billion of exports the U.S. generates supports 25,800 jobs. Overall, he calculates, 5.5 million Americans hold jobs that are linked to exports.

How many of those jobs would go in a trade war? It's hard to say, but it is instructive to remember that the infamous Smoot-Hawley Act, which effectively closed U.S. markets to imports, helped bring on the Great Depression. As the world economy slumped and America's trading partners retaliated, U.S. exports shrank from 6% of GNP in 1930 to 4.3% in 1933. An estimated one million workers in export-related industries lost their jobs. The price of severe protection today could be a world recession and possibly another depression. Either would cost more jobs than the protectionists can ever dream of saving. ■

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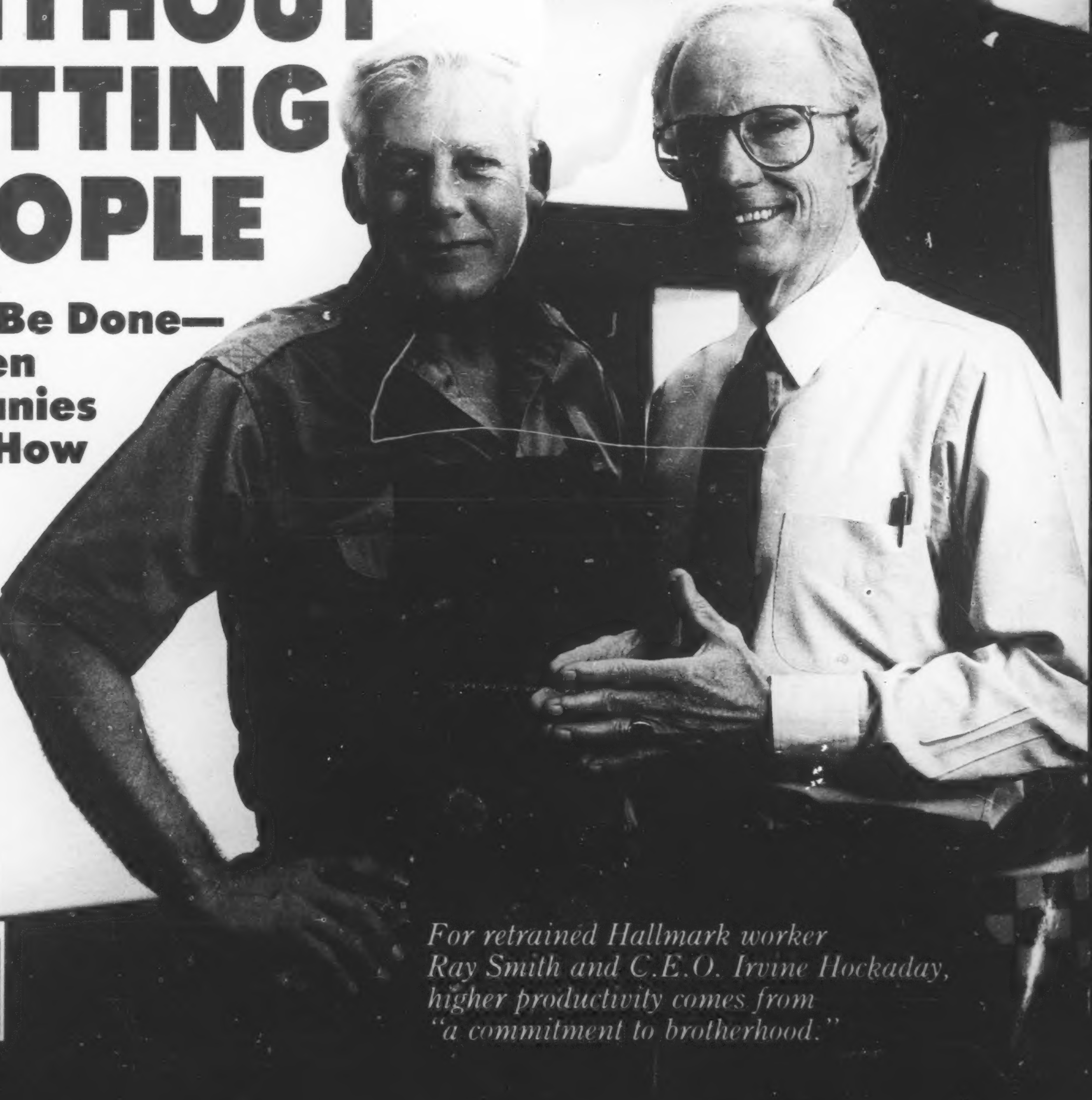
It *Can* Be Done— And Ten Companies Show How



For retrained Hallmark worker Ray Smith and C.E.O. Irvine Hockaday, higher productivity comes from "a commitment to brotherhood."

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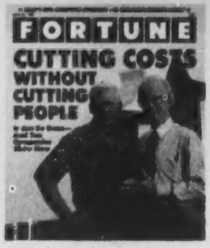
Corporate Performance



Maria Robledo photographed Hallmark worker Ray Smith and C.E.O. Irvine Hockaday in front of a sculpture at the company's Kansas City headquarters. See page 26.

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LETTERS

Corrections

FORTUNE'*s Directory of the 500 Largest U.S. Industrial Corporations (April 27) should have listed the 1986 total return to stockholders and the ten-year average return to stockholders for the following companies as: Colt Industries, 42.40% (rank: 84); 23.04% (rank: 88). Digital Equipment, 58.11% (rank: 37); 14.55% (rank: 229). FMC, 102.83% (rank: 7); 23.62% (rank: 82). Fuqua Industries, 23.76% (rank: 181); 27.28% (rank: 47). Owens-Corning Fiberglas, 151.96% (rank: 3); 14.93% (rank: 223). Russell Corp., 83.53% (rank: 16); 40% (rank: 5). Johnson Controls, 21.07% (rank: 200); 20.76% (rank: 122). For Figgie Corp., 1986 earnings per share should have been 25.4% and ten-year earnings-per-share growth rate 13.68% (rank: 86). Amdahl Corp.'s 1986 sales were $966,349,000 (rank: 310). Net income for Baxter Travenol Laboratories was $444,000,000 (rank: 39). Harcourt Brace Jovanovich's net income was $70,476,000 (rank: 194). The headquarters of American Brands is in Old Greenwich, Connecticut. CF Industries, a farm cooperative, has no stock market value. Procter & Gamble's industry code should have been 43, soap and cosmetics.*

In "The New Show at Neiman-Marcus" (April 27), FORTUNE *referred to the president and chief operating officer of General Cinema as Richard Tarr. His name is Robert J. Tarr Jr.*

In "The Great Leap of Computer Graphics" (News/Trends, April 27), FORTUNE *described the image on the screen as a fractured pelvis. The Johns Hopkins doctors are in fact looking at a patient's shoulders and ribs.*

Address letters to FORTUNE, Time & Life Building, Rockefeller Center, New York, N.Y. 10020. Letters may be edited for purposes of clarity or space.

INVESTOR'S SNAPSHOTS

EXPLANATORY NOTES

SALES in the Investor's Snapshots elsewhere in the magazine exclude excise taxes. Instead of sales, assets are shown for commercial banking companies, diversified financial companies, life insurance companies, and utilities, and operating revenues for transportation companies.

NET PROFIT includes any extraordinary items. Where applicable, sales and net profit for past quarters are restated to reflect mergers, acquisitions, or divestitures.

RETURN ON COMMON STOCKHOLDERS' EQUITY is calculated for the latest four quarters after subtracting dividends paid on preferred stock from net income. The five-year average is based on the last five full fiscal years.

PRICE/EARNINGS MULTIPLE is based on earnings per share for the latest four quarters.

TOTAL RETURN TO INVESTORS includes stock price changes and assumes dividends are reinvested on the date paid.

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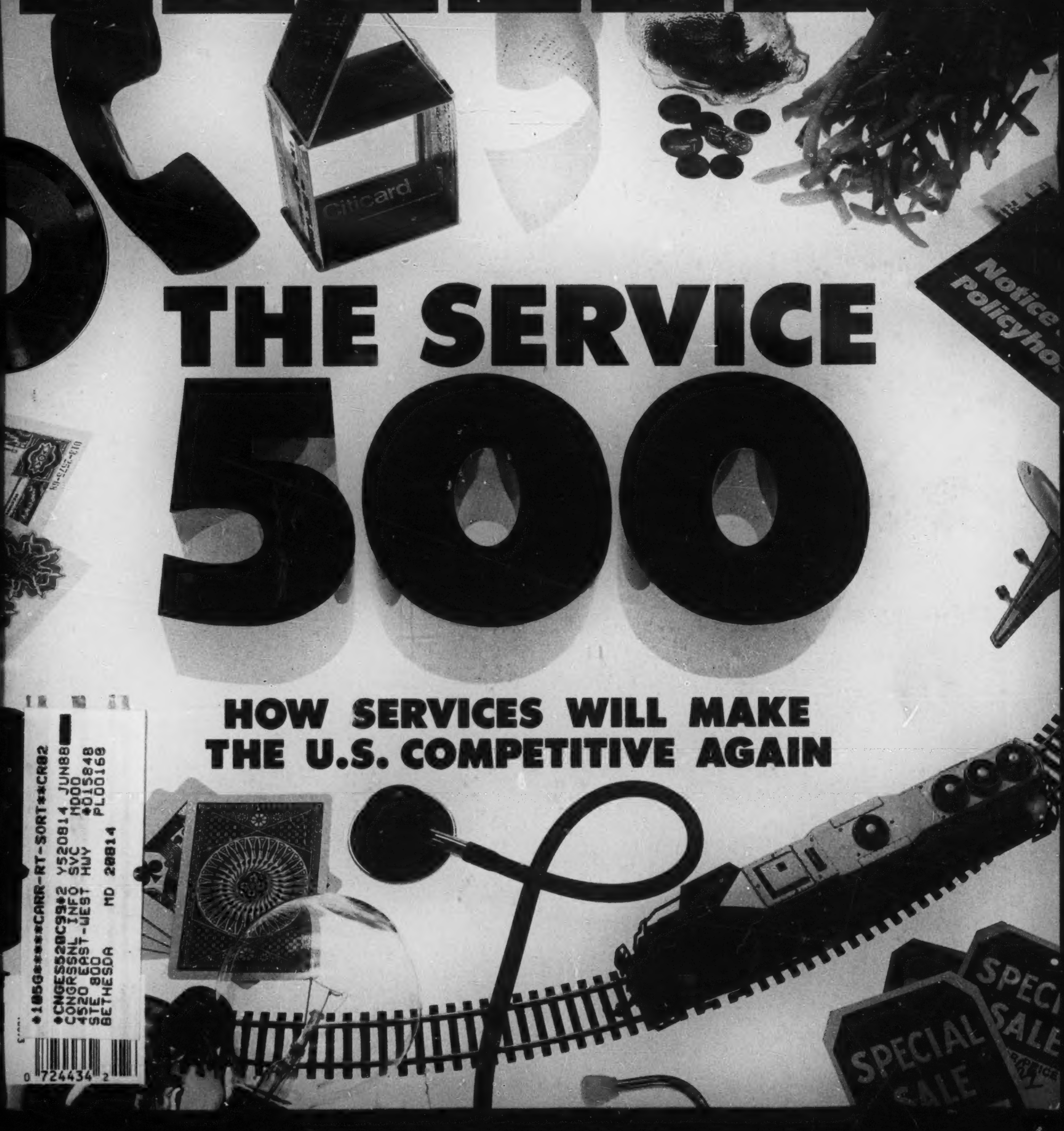
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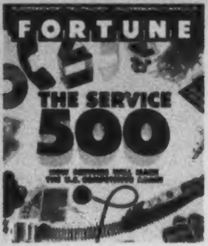

Victor Schrager gathered symbols of the 500 largest U.S. service companies for his cover photo. For their performance last year, see page 191.

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WHO'S AHEAD IN THE '88 MONEY RACE

Hard cash has never been more important to winning the American presidency. Out in front in fund raising: Republican Pat Robertson and Democrat Joe Biden.

■ *by Ann Reilly Dowd*

EVEN BEFORE Miami model Donna Rice—and how she spent the night of May 1—made headlines, Gary Hart's presidential campaign was in trouble. Though he led the Democratic polls, Hart lagged behind other hopefuls in raising money for the 1988 race and still owed more than $1.3 million for his 1984 campaign. Said William Carrick, campaign manager for Democratic Congressman Richard A. Gephardt: "In modern presidential politics, no front-runner has ever been in worse financial shape." Then publicity about alleged extramarital relationships devastated Hart's already shaky finances. One of the strongest reasons that Hart quit was his realization that the scandal made it impossible to raise more money.

Money, which a campaign strategist for Robert F. Kennedy once called the mother's milk of politics, has never been so important to the nourishment of candidates. With neither an incumbent President nor a shoo-in candidate, the 1988 race is the first wide-open contest in 20 years and therefore the first real test of the campaign reform laws of 1974. So far the race has attracted 16 entrants, who will spend millions of dollars to distinguish themselves from each other. Says former GOP Senator Paul Laxalt, who recently announced his candidacy: "Presidential campaigns have become as much a question of economic as political viability."

Electing the President in 1988 will cost about $400 million, up from $325 million in 1984, according to Herbert E. Alexander, a University of Southern California professor who is an authority on campaign finance. Since so many convention delegates will be chosen so early in the campaign, candidates will have to come up with the money sooner than ever. Kirk Clinkenbeard, Senate Republican leader Robert Dole's campaign finance director, says, "It used to be that a candidate needed to raise 35% of his money the year before the election and 65% the year of the election. That ratio has just about been reversed." Primaries or caucuses in 23 states,

See George run. *Vice President Bush heads a pack of Army troops while visiting Fort Knox. He leads in the polls, but not in the money raising.*

DENNIS BRACK/BLACK STAR

including Iowa, New Hampshire, Illinois, and the Super Tuesday states—14 Southern states, Massachusetts, and Rhode Island all select delegates Tuesday, March 8—will produce 54% of the pledged seats to the Democratic convention and 56% of the seats to the GOP's by March 15. In 1984 only 37% of the Democrats' seats and 20% of the Republicans' had been selected by then.

SHEPARD SHERBELL/PICTURE GROUP

A Missourian in Maine, *Richard Gephardt has a down-home St. Louis brew with the boys.*

THE EARLY LEADERS in the money race are surprises. Out in front in the Democratic dollar game is Senator Joseph R. Biden Jr. of Delaware, a second-string challenger who has raised $2 million, twice as much as Hart had before he pulled out. On the Republican side, long shot Marion G. "Pat" Robertson, the TV evangelist, has collected $7 million in campaign funds, $3 million more than front-runner George Bush.

By year's end, most Democratic strategists say their candidates will need to raise at least $5 million each. Though well-known figures such as New York Governor Mario Cuomo would probably have little difficulty raising that amount if they decide to enter the vacuum Hart's withdrawal has created, candidates without much national recognition will find that a daunting goal. Many Republican financial advisers think they will need $10 million this year to compete with Bush, who plans to raise at least $13 million before the end of the year.

Thanks to the campaign finance reform law, candidates must raise these millions with checks for $1,000 or less. That's the limit for an individual contribution; political action committees sponsored by business or labor can give a candidate up to $5,000. But only once an election. Before 1974 wealthy individuals could give unlimited amounts to a candidate. Now even a personal fortune does not give a challenger much of an advantage: Candidates are allowed to contribute only $50,000 to their campaigns. The law affects post-election as well as preelection gifts. So a defeated candidate cannot get help from backers who had already coughed up $1,000.

To qualify for federal matching funds, candidates must raise $5,000 in each of 20 states through individual contributions of $250 or less. After qualifying, only $250 of each $1,000 contribution is matched. A candidate must also stick to the law's limits on how much can be spent. By law, candidates can spend only $10 million, plus inflation based on 1974 dollars, to qualify for matching funds. They can also spend another 20% of the total. According to the formula, the 1988 spending ceiling works out to almost $27 million per candidate.

The 1974 reforms force candidates to devote more time and money to fund raising and therefore less to formulating and presenting ideas and issues. The most cost-effective money-raising technique is still tapping the big donor, not just for his $1,000, but for his friends and business associates who might also pony up the maximum amount. Campaign strategists frequently woo potential donors at breakfasts, lunches, teas, and dinners with the candidate: usually the fewer the invitees, the greater the financial expectations. Another fruitful fund-raising technique is sponsoring concerts and other performances by well-known entertainers. Since each ticket sold is considered an individual contribution, a candidate benefiting from, say, a successful rock concert could legally report 20,000 contributions of $10 each. A single $200,000 donation would be illegal. The most expensive money-raising operation is direct mail, those computerized letters asking for support. The costs of what some recipients consider waste basket filler come to 40% or more of the amount they generate.

RED MORGAN

At a Florida *fund-raiser, Pat Robertson greets supporters.*

Hart's much-publicized debt problems have helped make campaign borrowing much tougher this season. (Bumper stickers in Colorado read: "Honk if Hart owes you money.") However, Hart was not the only candidate to deal with angry creditors by repaying them cents on the dollar or nothing at all. According to the Federal Election Commission, 19 former presidential candidates, including John Connally and Jimmy Carter, still owe about $9

REPORTER ASSOCIATE *Lucretia Marmon*

ILLUSTRATION BY JUAN SUAREZ BOTAS

REPUBLICANS	MONEY RAISED THROUGH APRIL	PAID STAFF MEMBERS
Robertson	$7,000,000	75
Bush	$4,000,000	40
Dole	$3,000,000*	40
Kemp	$1,500,000	40
du Pont	$1,400,000	30
Haig	$400,000	18
Laxalt	$120,000	3

*Includes $2 million from 1986 Senate campaign.

DEMOCRATS	MONEY RAISED THROUGH APRIL	PAID STAFF MEMBERS
Biden	$2,000,000	40
Gephardt	$1,300,000	50
Babbitt	$825,000	30
Gore	$225,000	1
Simon	$150,000	20
Jackson	$85,000	6
Dukakis	N.A.	25

million. The best credit risks seem to be candidates who are incumbent members of Congress. John Glenn was allowed to use money in his Senate campaign coffers to repay old presidential debts.

Banks are not eager to lend to this year's crop of candidates. And many vendors now require them to pay cash up front or put down hefty deposits for products and services. Donald Rumsfeld, a former Secretary of Defense and former chief executive of G.D. Searle, recently dropped out of the GOP race because he did not want to spend so much time worrying about money. Just to establish a base in Illinois, he needed to deposit $6,000 on a $600-a-month office and more than $1 million for a phone system. A disgruntled Rumsfeld says: "Multiply that 1,000 times around the country, and you see what candidates are experiencing."

TO MAKE matters worse, at least one once-reliable revenue source may soon shrink: the purchases of seats on the campaign bus or plane by news organizations. The law allows a candidate to charge reporters a pro rata share of the cost of a trip, plus 10%. In 1984 Hart received $864,000 and Mondale more than $1 million from such charges. But cost cutbacks at TV networks, newspapers, and magazines may result in fewer boys (and girls) on the bus.

One of the most skillful navigators of these treacherous financial waters is Pat Robertson, 57, who by the end of April had raised a stunning $7 million. Not bad for a dark horse who has not yet formally announced his candidacy. He aims for a record $30 million—half by year's end. Even after the sex scandal of fellow televangelist Jim Bakker, contributions to the Robertson campaign continued to pour in. If Robertson hits the $30-million mark, he will not qualify for federal matching funds.

Most of his money has come from direct mail and fund raising by a few bigwigs such as Texas tycoon Nelson Bunker Hunt. Robertson is the first presidential hopeful in history to have his own 24-hour TV network, the Christian Broadcasting Network, and an hour-long talk show, *The 700 Club*, which airs three times a day in most areas. After he announces his candidacy, probably in September, Robertson says he will give up the show to avoid running afoul of government rules requiring stations to give candidates equal time.

With only 5% support among Republicans nationwide in a May Yankelovich poll, Robertson will have a tough time winning the nomination. But political strategists are unwilling to write him off. Besides his money and his partly free TV time, Robertson has about 75 full-time campaign staffers, including 25 in Iowa, New Hampshire, and the Super Tuesday states.

No. 2 in the money game is Vice President Bush, the early favorite of GOP voters and establishment financiers. From February 15 to the end of April, Bush, 64, raised an impressive $4 million, most of it by soliciting the support of influential donors. The Vice President's finance committee reads like a Who's Who of GOP and corporate elite. It includes top Reagan fund raisers Robert Mosbacher Sr. of Houston, Holmes Tuttle of California, and Ted Welsh of Tennessee, plus corporate chairmen Robert Galvin of Motorola, Richard Wood of Eli Lilly, James Ferguson of General Foods, and David Kearns of Xerox. With such heavyweights leaning on their friends and colleagues, Bush has an excellent chance of reaching the $27-million maximum.

Bush's lead in the polls has narrowed since Irangate, but his money will let him outspend most competitors in the critical early primaries and caucuses. If he does well, he could have the nomination locked up by mid-March, five months before GOP delegates convene in New Orleans. Even if he falters, he will probably have enough money

KARL SCHUMACHER

Interrupting a campaign strategy meeting, *Joe Biden takes a call in his Senate office.*

BOB
DOLE
PRESIDENT

DENNIS BLACK/BLACK STAR

The campaign scene *in the heartland: Bob Dole seeks support at a meeting in Fort Dodge, Iowa.*

left to push hard through the remaining state contests. Says Norman Ornstein, a campaign expert at the American Enterprise Institute: "If Jack Kemp or Bob Dole do poorly in the early races, it will be much harder for them to survive. But money enables Bush to stick it out. That gives him a huge advantage."

To compete with Bush, Dole's campaign strategists believe they need to raise at least $6 million in 1987, and they are aiming for $10 million. That's a tall order since Dole will be wooing much the same crowd of party stalwarts as Bush. But the 63-year-old Kansan has proved himself a powerful fund raiser, particularly among business leaders and political action committees that see a contribution to Dole, be he President or Senate minority leader, as a sound investment. Among his top business supporters: Philip Anschutz, president of Anschutz Corp., a Colorado oil and gas company; Herbert E. Collins, chairman of the Greater Boston Group, a real estate company; David Owen, president of Owen & Associates, a Kansas City investment counseling firm; and C. Howard Wilkins Jr., president of Maverick Development Corp., a Kansas franchisee of Pizza Hut.

To start with, Dole has some $2 million left over from his 1986 Senate campaign, which the Federal Election Commission is expected to allow him to use for the 1988 race. In only 20 days in March, he and his staff raised $625,000 by working the phones. Dole is concentrating on Reagan conservatives, particularly in regions of relative strength for him like the Northeast and Midwest. If Bush stumbles, Dole is the Republican most likely to pick up support—and dollars.

New York Congressman Jack Kemp, 51, who is running third in the polls for the GOP nomination, is not exactly rolling in dough. Although the ex-Buffalo Bills quarterback raised about $1.5 million by the end of April, insiders say he's already spent much of it on staff and direct-mail solicitation. His strategists feel frustrated by the restrictive financing laws and the extra-early primary schedule. Says Kemp finance director Rod Smith: "You can't buy enough TV time to impact Super Tuesday unless you raise money this year. But no one cares about the election this early, and not that many people are willing to give $1,000 so soon. It's an absolutely lunatic system."

Kemp's goal is to raise a modest $4 million to $5 million this year and pour it into Iowa and New Hampshire. The idea is to do well in those two states, then hope the press coverage and money flood in. Says Kemp campaign strategist Charles Black: "We're running an underdog campaign modeled in part after Bush's strategy in 1980 and Hart's in 1984."

Former Nevada Senator Laxalt, 64, a close friend of Ronald Reagan's, is well positioned to draw on the President's extensive fund-raising base and spoil the party for everyone else. Says Dole campaign director William B. Lacy: "Laxalt could do damage to Kemp with conservatives in New Hampshire. He could hurt Bush with people who see Laxalt as Reagan's true successor. And he could give us problems in the West, where we're courting Reagan's 1980 network." The other GOP candidates are less likely to make a mark. Former Delaware governor Pete du Pont, 52, has already spent most of the $1.4 million he's raised, with little apparent impact. Former Secretary of State Alexander Haig, 62, is just getting started.

WITHOUT HART, the battle for the Democratic nomination is likely to be long and tough. Of course there's still time for some unexpected late entry to make a brilliant run and sweep the nominating convention. But except for Jesse Jackson, none of the current contenders has much national recognition, and each will try to use the early primaries and caucuses to pull away from the pack. That will be expensive. As soon as Hart quit, the other candidates started to compete for his fund raisers. Among them: Florida lawyer Marvin Rosen, Philadelphia insurance executive William Batoff, New York investment adviser Mike Johnston, and San Francisco stockbroker Philip Schaefer.

In the money race Senator Biden, 44, is off to the most impressive start. He raised $2 million by the end of April—and has no campaign debts. Traditionally, dark horses like Biden get most of their support in their home states. But while the three-term Senator did well in Delaware, his biggest chunks of cash came from young professionals in Florida, New York, Illinois, Pennsylvania, and Southern California. Says Edward E. "Ted" Kaufman, Biden's campaign treasurer: "So far our donors have been mostly very idealistic people in their 30s and 40s who are now successful entrepreneurs. Biden is a very inspirational guy, and it seems he's reaching this postwar generation."

Biden, who chairs the Judiciary Committee and is a senior member of the Foreign Relations Committee, is also a favorite among liberal Democrats. Among the most enthusiastic are Jews who like his record on Israel and social issues. The Senator's goal is to raise $6 million or $7 million before the Iowa caucus, enough to separate himself from the second tier of challengers. Dole campaign director Lacy says, "Biden is off to a very good start. The question is whether

MICKEY OSTERREICHER/BLACK STAR

On the fly, *Jack Kemp works on his corn.*

he is a sprinter or a marathoner. If he continues to raise money at his current pace, he'll be a very formidable factor in the Democratic race."

Also off to a good start is Missouri Congressman Richard Gephardt, 46, who raised $1.1 million through the first quarter of 1987. His goal is to collect $5.8 million by year's end and, much like Kemp, concentrate his efforts on Iowa and New Hampshire. If his showings are strong there, his organization will swing into a fund-raising frenzy. Says Gephardt finance chairman Terence R. McAuliffe, who wrestled a lively alligator to raise $10,000 for Jimmy Carter's 1980 race: "We plan to have thousands of people in place across the country manning phone banks to cash in on the surge in support."

Half of Gephardt's early money has come from his home state. But he has also become a strong national fund raiser by playing up his role as head of the strategy-setting Democratic Caucus in the House. He was one of the early champions of tax reform, but he left that cause for the trade deficit issue. His protectionist solution: the Gephardt Amendment, which passed in the House version of the trade bill. The amendment would force many countries with huge trade surpluses with the U.S. to cut them 10% a year or face stiff sanctions. Among his colleagues who have chaired or are planning to chair fundraisers for him: Ways and Means Chairman Dan Rostenkowski, Energy and Commerce Committee Chairman John Dingell, Majority Leader Tom Foley, whip Tony Coelho, and Florida's Claude Pepper, 86, the Pied Piper of the senior citizens.

MONEY TALKED Albert Gore Jr., 39, into running for the Democratic nomination. Maryland developer Nathan Landow heads Impac '88, a group of Mondale moneymen who banded together after his defeat to influence the 1988 Democratic nomination. Out of the 48 members, Landow found that Gore, the first-term Tennessee Senator, attracted the most supporters—17. Nine Impac members backed Hart, five went to Gephardt, four to Biden. The Impac members who support Gore argue that the Democrats need someone who could win the South. Senators Dale Bumpers of Arkansas and Sam Nunn of Georgia would also do well in Dixie, but so far they have not announced that they would run.

The son of a former Senator, Gore is a Harvard-educated Vietnam veteran who worked as an investigative reporter for the Nashville *Tennessean* before serving eight years in the House and two in the Senate. He distinguished himself on issues as diverse as organ transplants and arms control. Predicts Ornstein: "In the next decade Al Gore will be the most talked-about Democrat, and deservedly so." Still, if he doesn't take off in Iowa and New Hampshire, he could be out of the running before it hits his home turf on Super Tuesday.

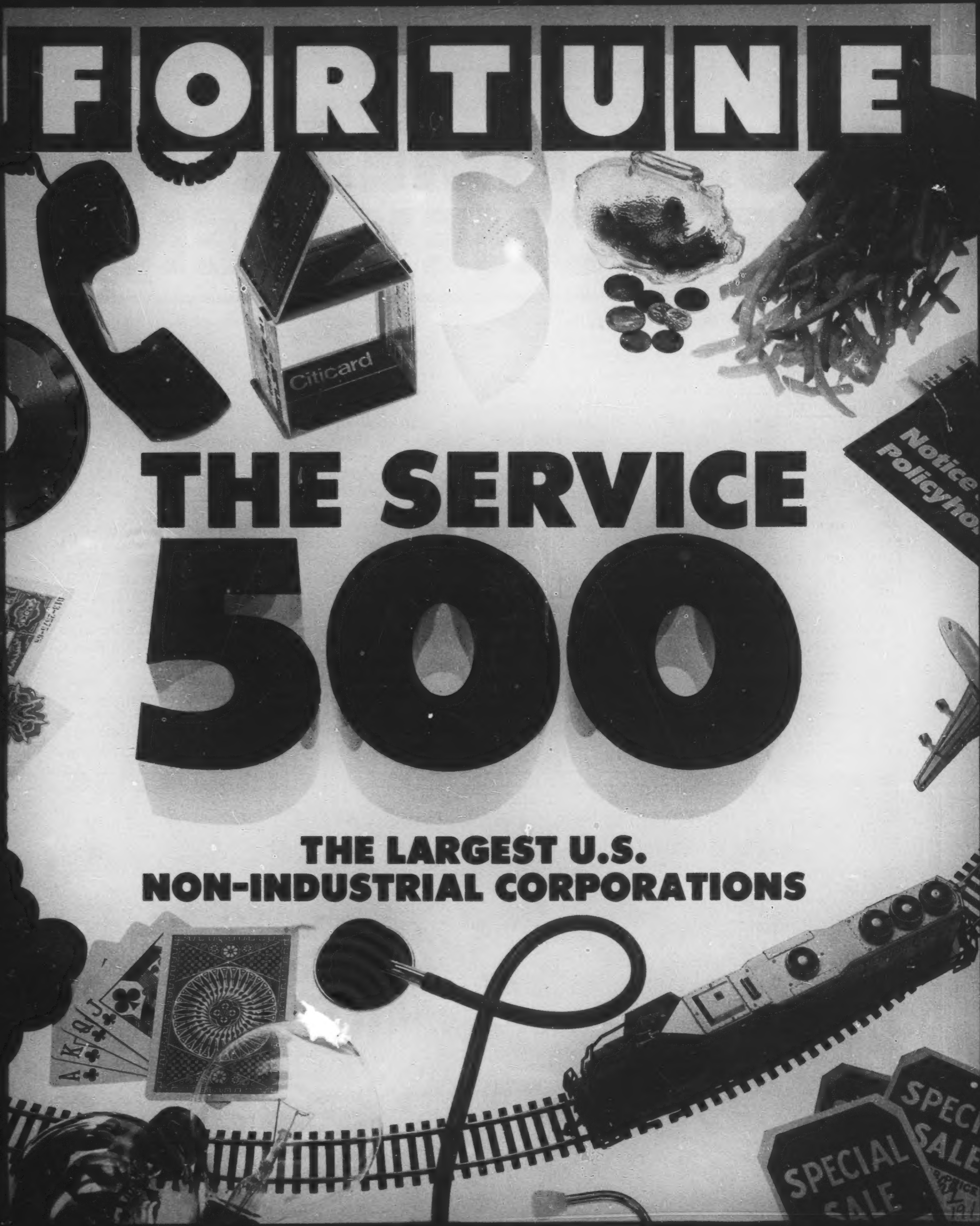
Other Democratic contenders are well behind the leaders in the money race. The Reverend Jesse Jackson, 45, has just launched a committee to explore his candidacy, and it has come up with less than $100,000. By the end of the year Jackson hopes to raise a modest $3 million. His grass-roots strength, particularly in the Super Tuesday states, may make up for his lack of money. Former Arizona governor Bruce Babbitt, 48, has drummed up less than $1 million, mostly from his home state. Illinois Senator Paul Simon, 58, is also expected to do well at home, as is Governor Michael S. Dukakis, 53, of Massachusetts. Dukakis is running far ahead in the polls in neighboring New Hampshire, where a resounding victory might bring money and momentum.

Money won't guarantee victory, of course. Former Texas governor John Connally spent $12.6 million in 1980 and won only a single delegate to the Republican convention. But money is critical, and candidates roundly agree that the financing laws make it too difficult to come by. No one disputes the value of financial disclosure or federal matching funds. But almost everyone seems to support raising individual contribution ceilings. Says Donald Rumsfeld: "Campaign financing laws, though well-intentioned, erect barriers to entry. To raise a minimal $6 million to $8 million, I would have had to spend all my time fund raising, or risk ending up in debt like Hart." While necessary, scrounging for money should not be the driving force in the process by which Americans chose their President. ■

PINKERTON
ACADEMY

RICK FRIEDMAN/BLACK STAR

Looking *for the youth vote, Michael Dukakis meets boarding school students in New Hampshire.*



FORTUNE

THE SERVICE 500

THE LARGEST U.S. NON-INDUSTRIAL CORPORATIONS

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Notice
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SPECIAL SALE
SPECIAL SALE

FLUSH TIMES FOR THE MONEY MEN

THE BIG WINNERS in America's service economy last year did their business where scandal was hottest, on Wall Street. Lower interest rates and raging bull markets enabled most finance-oriented companies to reap heady profits. Diversified financial companies, including investment banks and property and casualty insurers, performed best of all. The earnings of the 50 biggest jumped 159%, to $11.7 billion. Profits of the 50 biggest savings institutions rose 40%, a truly remarkable gain for a group whose net income nearly quadrupled the year before.

The year also was the second big one in a row for other firms whose basic business is money. Four of the eight separate lists that compose FORTUNE's directory of the 500 largest service companies include businesses that get more than half their revenues from financial services. In addition to the diversified financials and the S&Ls, they are the 100 largest commercial banks and the 50 largest life insurers. Assets are the best measure of size for those companies, and their combined total swelled by 17% last year, to $3.9 trillion. That far outshone the performance of the other companies on the Service 500—the 100 largest diversified service companies and the 50 biggest retailing, transportation, and utility companies. Their combined sales fell 3% to $845 billion.

Even with those declines, most service companies did a lot better than industrial ones. Last year the 500 largest industrials, which get over half their revenues from manufacturing or mining, saw profits fall 6.7%. The profits of the Service 500 were 8% higher than the year before. But what was good for the service economy wasn't necessarily good for investors. Someone who invested an equal amount a year ago in each of the stocks on the Service 500 would have a capital gain of around 3% today, far less than the gain of any other index you could name (see Personal Investing).

The 100 biggest diversified service companies, which range from food wholesalers to computer software vendors to casino operators, did just fine. The group's median sales increase was a respectable 12.2%. But total sales for the diversified service directory dropped 15%. The reason: The top four companies on last year's list, whose sales made up one-fourth of the group's $228-billion total, all vanished from the list this year. Phibro-Salomon, No. 1 in 1985, cut back its commodities operations and expanded its worldwide securities trading. Renamed Salomon, it became the third-largest diversified financial company in 1986, even though accounting changes slashed reported revenues from $27.9 billion in 1985 to $6.8 billion last year. InterNorth, No. 2 among diversified service companies in 1985, sold off petrochemical and natural gas operations to reduce debt and preserve its 37,000-mile gas pipeline. This year it has a new name, Enron, and appears as No. 26 on the list of the largest utilities. RCA disappeared into the maw of GE, the sixth-largest industrial company. And Union Pacific traded its No. 4 rank among diversified service companies for the same position on the list of transporta-

PHOTOGRAPH BY STEPHEN WILKES

tion companies. It made the switch by coupling another railroad and a trucker to its train while putting the brakes on oil refining.

With the departure of the big four, smaller diversified service companies advanced in rank largely by default. Super Valu Stores, No. 6 last year, took first place in 1986 with $7.9 billion in sales, up 21% from 1985. It was followed closely by Fleming Cos., No. 5 a year ago. Both are food wholesalers that have grown steadily by acquiring weak competitors and assembling chains of supermarkets. But both companies also had lower profits in 1986 because they closed unprofitable stores.

McKesson, the nation's largest distributor of drugs, toiletries, and liquor, reached third place partly by buying into new markets. CBS jumped from No. 8 to No. 4 with a meager 2.4% increase in revenues. Alco Standard, No. 7, distributes everything from paper to auto parts to wine. National Intergroup, No. 10, owns half of rusty old National Steel but gets most of its revenues from selling oil and pharmaceuticals. Diversification hasn't let the company brush all the oxidation off its financial record: It lost $88 million last year.

The new arrivals on the list of diversified service companies reflect the impact of restructuring. American Can—a former metal bender that now does almost everything but—makes its debut as No. 9. (The company just changed its name to Primerica.) Led by Gerald Tsai, a financial wizard who rediscovered his magic after losing it in the go-go 1960s, American Can was the 140th-largest industrial company in 1985. But last year over half its sales came from retailing and other services. Capital Cities Communications/ABC joined the list as No. 11 after Cap Cities, which used to get most of its revenues from newspaper publishing, bought American Broadcasting, the 17th-largest diversified service company in 1985.

ABC's old slot was taken by Henley Group, a company created just a year ago when Allied-Signal spun off three dozen unwanted operations. Run by Chairman Michael Dingman, this collection of engineering, distribution, and many other types of businesses is known, for good reason, as Dingman's Dogs. Henley Group lost $426 million in 1986, compared with the $28.2 million it would have lost if it had existed independently in 1985.

IN COMMERCIAL banking the top two companies continued playing their epic game of hare and tortoise. For the fifth year in a row, Citicorp widened its lead over BankAmerica. Its assets rose by $23 billion, to $196 billion, and now are nearly double the assets of its troubled competitor in San Francisco. Chase Manhattan, No. 3, is likely to move up a notch in 1987. BankAmerica's losses, which widened from $337 million in 1985 to $518 million last year, constrain its ability to grow by making new loans. Were it not for BankAmerica's troubles and massive losses by six banks in the depressed oil patch, the profits of the 100 largest banks would have risen 14.7% last year. As it was, the group scored a 1% gain.

The climate was much healthier last year for the 50 largest diversified financial companies. American Express, buoyed by record-breaking results at Shearson Lehman Brothers, its brokerage and investment banking subsidiary, saw assets rise 33%, to $99 billion. Amex's profits boomed by more than half, to $1.25 billion, third highest on the entire Service 500, after Bell South and Sears Roebuck. Yet in one way American Express, No. 2, was eclipsed by Aetna Life & Casualty, No. 4. Helped by a tax-loss carry-forward of $178 million, Aetna's profits climbed 178%, to $1.04 billion.

The diversified financial group changed less than most, with only two newcomers. Morgan Stanley qualified for inclusion by going public in March 1986. The investment banking firm joined the list at No. 8, with assets of $29 billion. Its return on equity, a handsome 25.2%, was fourth highest within the group. Fannie Mae—the Federal National Mortgage Association—led the list for the seventh year in a row. Fannie Mae has an

In a high-tech aerie *Shearson Lehman Brothers' traders manage a bond inventory that can reach $30 billion. Last year the investment banker turned a $316-million profit for its parent, American Express.*

edge on most other bond issuers because its debt is backed by Uncle Sam. But Fannie Mae grew mainly because lower interest rates enabled it to borrow more money and buy a record volume of mortgages. Now that rates are rising, look for American Express to seize star billing.

Lower interest rates did all sorts of good for savings institutions. The drop in mortgage rates precipitated an orgy of home refinancing, generating lush one-time fees for S&Ls. Cheaper money also widened the spread between what S&Ls pay for funds and their income from existing mortgages. Three new thrifts on the list—Empire of America Federal Savings, No. 17; TCF Banking & Savings, No. 19; and Seamen's Corp., No. 39—achieved their ranks not by fantastic growth but simply by going public.

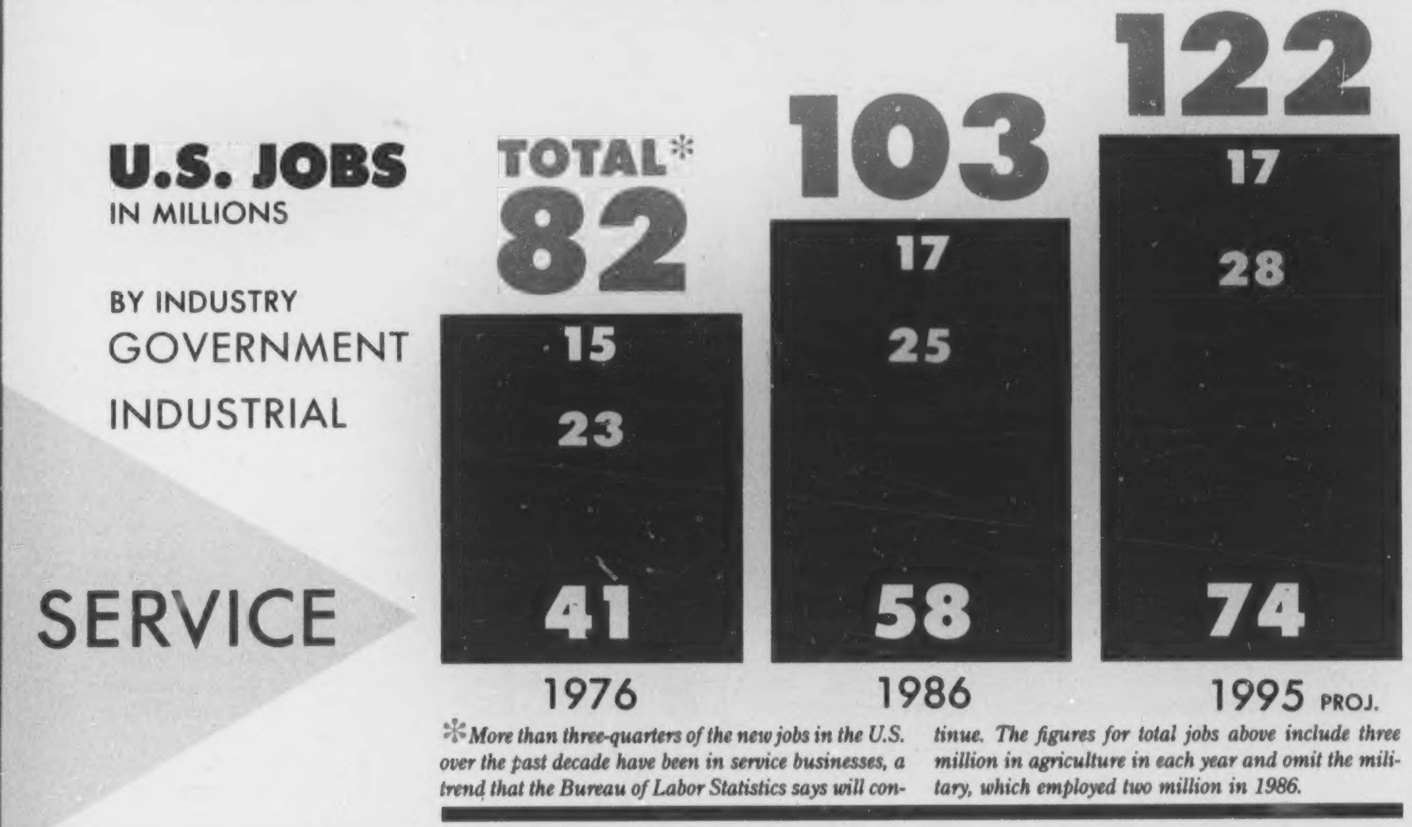
Life insurers also dined out on falling interest rates. Like Prudential, the list's perennial leader, they've been selling lots of policies that pay returns based on market rates of interest.

Low inflation—a big factor behind the low interest rates that helped financially oriented service companies—was poison for retailers. Beset by hordes of competitors and unable to raise prices much, the group saw its return on sales stick at an anemic 2.4%. Last year followed an equally tough 1985. The unsurprising result was a wave of restructuring. Four of the largest retailers of 1985—Jack Eckerd, R.H. Macy, Revco D.S., and Safeway Stores—went private, and two others, Allied and Associated Dry Goods, were acquired. Those that disclosed financial results remained on the list. By merging with Associated, May Department Stores doubled its sales to $10.4 billion and skipped from No. 19 up to No. 10.

Transportation companies were still trapped in the fiery furnace of deregulation that has been searing them for most of the 1980s. Fifteen of the 50 largest lost money last year, up from nine in 1985, and mergers absorbed five airlines and three truckers. The increasing concentration made room on the list for eight smaller companies, including Braniff and HAL, a Hawaiian airline. The level of revenues needed to make the list dropped from $405 million in 1985 to $225 million last year.

UTILITIES turned up the juice for shareholders in 1986. Profits of the 50 largest rose 13% on a modest 2% increase in revenues, largely because the prices for their most important feedstocks, oil and money, dropped sharply. The median return on sales was 12.7%, the highest for any service group. Ranked by return on sales, nine of the top ten companies in the Service 500 were utilities. Though telephone utilities kept their hammerlock on the top of the list, the nation's two largest electric companies, Pacific Gas & Electric and Southern, clambered to No. 5 and No. 7.

After two years of stellar results, finance-oriented service companies are likely to fall back to earth in 1987. With interest rates on the rise again, bond prices are being driven down. In April, Merrill Lynch reported that it had lost $275 million on mortgage-backed bonds, and other brokerage houses are sure to be hurt. S&Ls should suffer as well because the rates they pay for funds typically change faster than the prices they can charge borrowers. And problems with Latin American loans are depressing the profits of some large commercial banks. The heroes on next year's Service 500 probably will be companies that deal in things other than money. **— Edward Prewitt and Sarah E. Morgenthau**



More than three-quarters of the new jobs in the U.S. over the past decade have been in service businesses, a trend that the Bureau of Labor Statistics says will continue. The figures for total jobs above include three million in agriculture in each year and omit the military, which employed two million in 1986.

THE 100 LARGEST DIVERSIFIED SERVICE COMPANIES

RANK 1986	RANK 1985	COMPANY	SALES[1] $ THOUSANDS	ASSETS $ THOUSANDS	ASSETS RANK	NET INCOME $ THOUSANDS	NET INCOME RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	STOCKHOLDERS' EQUITY RANK
1	6	**Super Valu Stores** (Eden Prairie, Minn.)[2]	7,905,016	1,555,451	33	91,247	23	534,830	33
2	5	**Fleming Cos.** (Oklahoma City)	7,652,624	1,242,289	38	39,315	42	472,732	38
3	7	**McKesson** (San Francisco)[3]	6,285,000	2,176,000	29	77,900	28	695,800	27
4	8	**CBS** (New York)	4,900,400	3,370,300	9	375,100	2	806,500	20
5	10	**Fluor** (Irvine, Calif.)[4]	4,678,661	2,565,393	21	(60,443)	83	950,240	17
6	11	**Hospital Corp. of America** (Nashville)	4,665,592	6,793,372	1	174,644	12	2,015,383	4
7	13	**Alco Standard** (Wayne, Pa.)[5]	4,334,022	1,229,711	39	56,963	33	425,590	40
8	15	**Electronic Data Systems** (Dallas)[6]	4,321,000	2,409,600	22	260,900	7	798,300	21
9	●	**American Can** (Greenwich, Conn.)[7]	4,292,800¶	5,350,100	2	196,300‡	9	1,354,100	11
10	28	**National Intergroup** (Pittsburgh)[3]	4,166,294	2,270,904	26	(88,451)	86	763,023	22
11	●	**Capital Cities Comm./ABC** (New York)[8]	4,124,374	5,191,416	3	447,689**	1	1,948,627	5
12	19	**Ryder System** (Miami)	3,768,328	4,783,910	4	160,933	13	1,239,231	12
13	14	**ARA Holding** (Philadelphia)[5]	3,748,749	1,651,231	32	15,502	61	114,384	81
14	9	**Halliburton** (Dallas)	3,509,439	3,328,028	10	(515,214)	90	2,150,172	3
15	18	**Wetterau** (Hazelwood, Mo.)[8]	3,482,315	639,564	64	31,825	47	243,127	55
16	21	**Sysco** (Houston)[9]	3,172,269	781,291	60	58,328	32	397,822	45
17	●	**Henley Group** (La Jolla, Calif.)[10]	3,172,000	4,698,000	5	(426,000)	89	3,364,000	1
18	20	**Dun & Bradstreet** (New York)	3,113,506	3,117,664	15	339,990	4	1,448,830	9
19	27	**Bergen Brunswig** (Orange, Calif.)[11]	3,065,536	785,159	59	20,661	57	176,839	69
20	24	**National Medical Enterprises** (Los Angeles)[12]	2,962,000	3,296,000	11	85,000‡	26	1,010,000	15
21	32	**Warner Communications** (New York)	2,848,324	3,223,452	13	185,795	11	1,172,520	13
22	16	**ENSERCH** (Dallas)	2,722,821	3,233,558	12	26,878	49	973,393	16
23	23	**Greyhound** (Phoenix)	2,647,428	2,963,731	16	186,158	10	1,054,407	14
24	33	**Humana** (Louisville, Ky.)[11]	2,600,610	2,916,230	17	54,452	34	896,358	18
25	31	**American Medical Int'l** (Beverly Hills, Calif.)[11]	2,569,893	3,901,107	8	(97,279)	87	886,748	19
26	25	**Associated Milk Producers** (San Antonio)[13]	2,535,873	418,514	76	N.A.		135,672	75
27	34	**Turner** (New York)	2,497,235	954,700	49	10,147	71	71,488	90
28	37	**Walt Disney** (Burbank, Calif.)[5]	2,470,900	3,121,000	14	247,300	8	1,418,700	10
29	35	**MCA** (Universal City, Calif.)	2,441,374	2,658,029	20	155,204	14	1,582,394	7
30	29	**Genuine Parts** (Atlanta)	2,394,072	1,011,495	47	121,552	17	758,493	23
31	12	**Gulf+Western** (New York)[4,14]	2,093,800	4,243,400	7	267,400**	6	1,902,100	6
32	36	**Morrison Knudsen** (Boise, Idaho)	2,083,191	969,393	48	39,411	41	423,642	41
33	81	**Berkshire Hathaway** (Omaha)	2,058,236	4,441,655	6	282,361	5	2,377,797	2
34	42	**Beverly Enterprises** (Pasadena, Calif.)	2,019,262	2,219,703	28	44,943‡	36	724,325	25
35	43	**Waste Management** (Oak Brook, Ill.)	2,017,775	2,795,038	18	370,930	3	1,580,264	8
36	26	**Amfac** (San Francisco)	1,962,204	1,160,631	43	(66,599)	84	404,038	44
37	46	**Subaru of America** (Cherry Hill, N.J.)[4]	1,939,286	492,504	72	93,960	22	315,803	50
38	●	**TW Services** (New York)	1,918,051	1,060,432	46	15,683	59	412,137	43
39	44	**Castle & Cooke** (Los Angeles)	1,809,175	1,519,403	34	43,925	37	507,437	35
40	40	**Roundy's** (Pewaukee, Wis.)[13]	1,807,852	255,915	90	N.A.		40,487	97
41	41	**Holiday** (Memphis)	1,647,788	2,278,189	25	103,370	20	638,733	30
42	50	**Bally Manufacturing** (Chicago)	1,592,818	2,313,968	23	23,701	54	492,956	37
43	49	**Nash-Finch** (St. Louis Park, Minn.)	1,557,033	313,908	85	13,834	65	116,416	80
44	48	**Eastern Gas & Fuel Associates** (Boston)	1,477,178¶	1,135,257	44	19,088	58	431,961	39
45	30	**Tesoro Petroleum** (San Antonio)[5]	1,472,789	566,868	68	(124,842)	88	197,543	66
46	38	**IU International** (Wilmington, Del.)	1,455,391	821,873	57	88,354**	24	244,925	54
47	53	**Centex** (Dallas)[3]	1,427,201	915,297	52	47,569	35	327,792	48
48	47	**Super Food Services** (Dayton, Ohio)[11]	1,422,309	187,241	99	10,588	69	69,625	91
49	45	**Avnet** (New York)[9]	1,415,612	908,051	53	23,857	53	646,927	29
50	22	**Charter** (Jacksonville, Fla.)	1,329,264	610,812	66	153,181‡	15	47,496	95

THE DEFINITIONS AND CONCEPTS UNDERLYING THE FIGURES IN THIS DIRECTORY ARE EXPLAINED ON PAGE 222.

● Not on last year's list.

¶ Includes sales from discontinued operations of at least 10%.

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.

‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[1] Net sales include all operating revenues and revenues from discontinued operations when they are published. All figures are for the fiscal year that ended December 31, 1986, unless otherwise noted. Sales of subsidiaries are included when they are consolidated. All companies on the list must have derived more than 50% of their revenues from non-manufacturing and/or non-mining businesses. Excluded (but eligible for the lists that follow) are companies deriving more than 50% of their revenues solely from banking, life in-

THE SERVICE 500

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		SALES		STOCKHOLDERS' EQUITY					1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
26,575	19	1.2	61	17.1	22	1.23	1.45	0.22	18.51	15	11.42	44	26.39	19
15,880	36	0.5	74	8.3	63	1.80	2.87	1.05	5.54	49	(9.21)	64	20.06	40
17,200	33	1.2	58	11.2	50	3.96	3.60	2.58	4.38	51	26.40	20	22.28	27
18,300	31	7.7	14	44.9§	3	15.42	0.81	5.75	10.37	37	12.09	43	12.78	63
21,391	24	—		—		(0.76)	(8.01)	1.29	—		(23.81)	81	1.90	77
89,000	3	3.7	35	8.7	60	2.08	3.75**	0.54	14.39	28	(13.49)	67	20.83	35
18,700	29	1.3	56	13.2§	41	3.24	2.32	1.55	7.62	46	13.25	42	21.48	31
45,000	10	6.0	22	32.7	7	2.13	1.57	N.A.	—		—		—	
24,300†	20	4.6	30	12.9§	44	3.21‡	2.53	2.55	2.33	55	45.33	11	15.85	53
6,965	59	—		—		(4.50)	(1.44)	4.53	—		(48.22)	85	(6.54)	80
19,960	28	10.9	8	23.0	14	27.55**	10.87	2.30	28.19	4	19.53	30	25.60	20
34,981	15	4.3	33	13.0	43	2.09	1.73	0.49	15.69	22	52.59	6	28.17	16
115,000†	2	0.4	76	13.6	40	N.A.	N.A.	N.A.	—		—		—	
46,909	8	—		—		(4.85)	(3.12)‡	2.61	—		(6.67)	61	0.80	78
10,200†	52	0.9	65	13.1	42	2.90	2.51	1.54	6.50	47	0.95	51	15.59	55
10,700	51	1.8	48	14.7	33	1.34	1.17	0.26	18.02	16	35.21	14	34.29	12
22,400	23	—		—		(5.33)	N.A.	N.A.	—		—		—	
58,000	6	10.9	7	23.5	13	4.47	3.88	0.90	17.38	17	28.58	18	25.56	21
4,552	71	0.7	71	11.7	48	1.54	1.74	0.16	25.21	7	(31.49)	83	25.40	22
83,000	4	2.9	39	8.4	61	1.08	1.98	0.25	15.96	21	3.03	48	33.91	13
11,660	49	6.5	18	15.9	28	1.26	1.43	0.56	8.48	44	21.94	24	22.09	28
16,300	34	1.0	64	2.4§	75	0.17	(1.12)	1.71	(20.62)	65	(19.96)	77	8.88	67
35,922	13	7.2	16	17.7§	20	4.09	2.48	1.76	8.80	42	(0.46)	54	14.74	58
45,300	9	2.1	45	6.1	66	0.56	2.19	0.12	16.37	19	(36.96)	84	35.11	11
47,000	7	—		—		(1.12)	1.94	0.35	—		(21.11)	79	18.74	44
3,731	74	—		—		N.A.	N.A.	N.A.	—		—		—	
3,103	78	0.4	77	14.2	36	2.41	2.64	0.86	10.82	36	(15.47)	71	20.45	39
32,000	18	10.0	10	17.4	21	1.82	1.29	0.58	12.19	34	54.11	5	15.72	54
16,000	35	6.4	19	9.8	53	2.02	2.02	1.34	4.20	52	(20.95)	78	16.73	52
13,906	42	5.1	28	16.0	26	2.28	2.34	0.96	9.04	40	17.11	32	13.79	59
20,800	25	12.8	4	14.0§	37	4.28**	3.31	3.41	2.30	56	29.37	17	20.50	37
15,660	37	1.9	47	9.3	57	3.60	3.85	1.53	8.91	41	(7.71)	62	25.39	23
23,000	22	13.0	3	11.9	47	246.19	379.99	23.40	26.53	6	16.05	35	40.51	5
116,000	1	2.2	44	6.2	65	0.71‡	1.07	(0.07)	—		(8.95)	63	33.79	14
18,135	32	18.4	1	23.5	12	1.46	1.72	0.20	22.20	9	58.51	4	40.00	6
20,000	26	—		—		(4.27)	1.08	1.55	—		(16.98)	74	8.52	68
980	94	4.9	29	29.8	9	1.92	1.57	0.08**	37.63	1	2.13	50	54.59	1
59,000	5	0.8	69	3.8	72	0.27	N.A.	N.A.	—		—		—	
34,600	16	2.4	42	8.4§	62	0.56	(1.43)	1.60	(9.95)	62	48.08	9	10.79	64
4,700	66	—		—		N.A.	N.A.	N.A.	—		—		—	
43,586	11	6.3	20	16.2	25	4.15	5.38	1.28	12.48	32	20.64	29	21.51	30
23,000†	21	1.5	55	4.8	68	0.81	0.95	0.45	5.94	48	20.93	27	10.36	65
7,000†	58	0.9	66	11.9	46	2.70	2.36	1.68	4.88	50	17.08	33	21.48	32
6,200	62	1.3	57	4.4	70	0.82	(1.61)	3.01	(12.19)	63	21.25	26	5.45	72
2,300	83	—		—		(9.76)	(7.01)	1.94	—		16.87	34	(1.41)	79
14,000	41	6.1	21	36.1	6	3.22**	(6.43)	1.25	9.92	38	5.85	47	13.55	61
4,600	68	3.3	37	14.5	34	2.62	2.20	0.47	18.83	14	24.11	23	17.67	50
1,830	88	0.7	70	15.1§	30	1.48	1.31	0.36	15.29	24	21.78	25	22.01	29
9,250	54	1.7	50	3.7	73	0.67	1.39	1.16	(5.33)	60	(23.56)	80	15.24	57
2,784	81	11.5	5	322.5	1	3.23	(0.72)	0.81**	14.83	26	63.16	2	5.29	73

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surance, finance, savings, retailing, transportation, or utilities.

[2] Figures are for fiscal year ended February 28, 1986.

[3] Figures are for fiscal year ended March 31, 1986.

[4] Figures are for fiscal year ended October 31, 1986.

[5] Figures are for fiscal year ended September 30, 1986.

[6] Wholly owned by General Motors (No. 1 on the FORTUNE 500 Industrials).

[7] Company was No. 140 on last year's FORTUNE 500 Industrials.

[8] Company formed January 3, 1986, upon acquisition of American Broadcasting (1985 rank: 17) by Capital Cities Communications (No. 306 on last year's FORTUNE 500 Industrials).

[9] Figures are for fiscal year ended June 30, 1986.

[10] Company comprises 35 businesses spun off from Allied-Signal (No. 25 on the FORTUNE 500 Industrials) May 27, 1986.

[11] Figures are for fiscal year ended August 31, 1986.

[12] Figures are for fiscal year ended May 31, 1986.

[13] Cooperatives provide only net margin figures, which are not comparable to the net income figures in this list.

THE 100 LARGEST DIVERSIFIED SERVICE COMPANIES

RANK		COMPANY	SALES[1]	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
51	55	**Browning-Ferris Industries** (Houston)[5]	1,328,393	1,225,685	40	136,853	16	746,867	24
52	62	**Fischbach** (New York)[5]	1,318,162	524,652	69	(29,222)‡	81	132,630	76
53	•	**Alco Health Services** (Wayne, Pa.)[5,18]	1,285,811	385,194	78	15,640	60	129,475	77
54	59	**Di Giorgio** (San Francisco)	1,204,529	340,140	81	14,333	62	158,641	70
55	63	**Automatic Data Processing** (Roseland, N.J.)[9]	1,204,246	1,313,414	35	105,960	19	664,848	28
56	56	**Whittaker** (Los Angeles)[4]	1,192,147¶	608,585	67	(4,946)	78	204,668	65
57	51	**Pittston** (Greenwich, Conn.)	1,189,949	936,057	50	10,016	72	500,685	36
58	79	**Blount** (Montgomery, Ala.)[2]	1,165,693	648,206	63	12,213‡	68	137,170	74
59	57	**W.W. Grainger** (Skokie, Ill.)	1,159,595	819,962	58	86,112	25	582,091	32
60	•	**CBI Industries** (Oak Brook, Ill.)[16]	1,155,229	1,167,499	41	23,125‡	55	584,624	31
61	•	**Allegheny Beverage** (Cheverly, Md.)[3]	1,138,832	639,455	65	59,842‡	30	151,126	71
62	67	**ServiceMaster** (Downers Grove, Ill.)	1,122,503	340,226	80	32,775	46	32,106	99
63	72	**NIKE** (Beaverton, Ore.)[12]	1,069,222	476,838	73	59,211	31	316,846	49
64	65	**Ace Hardware** (Oak Brook, Ill.)[13]	1,060,632	338,197	82	N.A.		109,881	82
65	73	**Culbro** (New York)	1,059,531¶	396,291	77	25,649	51	116,522	79
66	•	**Ogden** (New York)[17]	1,046,689¶	836,185	56	119,562	18	395,781	46
67	78	**Rykoff-Sexton** (Los Angeles)[18]	1,037,272	301,724	87	8,651	73	90,560	84
68	77	**Kelly Services** (Troy, Mich.)	1,033,560	213,423	93	36,436	44	147,883	72
69	66	**Gelco** (Eden Prairie, Minn.)[19]	1,016,391¶	2,289,953	24	(6,408)‡	79	214,830	61
70	61	**Dairymen** (Louisville)[11,13]	987,039	252,128	91	N.A.		87,438	85
71	80	**Manpower** (Milwaukee)[2,20]	979,086	307,224	86	(29,351)	82	83,954	87
72	•	**Viacom International** (New York)	919,154	2,040,770	30	(9,856)	80	420,528	42
73	•	**Maxicare Health Plans** (Los Angeles)	914,385	1,163,191	42	4,297	77	227,786	57
74	76	**Dravo** (Pittsburgh)	902,864¶	500,383	71	14,170‡	64	210,508	64
75	54	**Indiana Farm Bureau Cooperative** (Indianapolis)[11,13]	892,453	180,874	100	N.A.		75,789	89
76	74	**U.S. Home** (Houston)	890,472¶	725,649	62	(80,071)	85	220,917	59
77	64	**Commercial Metals** (Dallas)[11]	885,411	293,559	89	14,226	63	146,[illegible]59	73
78	83	**Pioneer Hi-Bred International** (Des Moines)[11]	884,726	849,814	54	73,753	29	510,609	34
79	•	**Comdisco** (Rosemont, Ill.)[5]	869,000	1,699,314	31	78,808	27	350,589	47
80	89	**PHH Group** (Hunt Valley, Md.)[18]	865,805	2,753,834	19	38,536	43	262,442	53
81	•	**Guy F. Atkinson** (South San Francisco, Calif.)	857,618	458,534	75	8,526	74	187,953	68
82	87	**Computer Sciences** (El Segundo, Calif.)[3]	838,587	467,734	74	23,948	52	213,853	62
83	86	**Pulte Home** (West Bloomfield, Mich.)	836,939	523,656	70	20,738	56	188,180	67
84	68	**Countrymark** (Columbus, Ohio)[11,13]	834,278	199,200	97	N.A.		55,162	94
85	94	**Kay** (Alexandria, Va.)	809,643	247,194	92	13,326	66	34,591	98
86	82	**Sunkist Growers** (Sherman Oaks, Calif.)[4,13]	802,415	206,323	95	N.A.		58,304	92
87	71	**Perini** (Framingham, Mass.)	801,493	325,310	83	5,043	75	86,220	86
88	93	**Interpublic Group of Companies** (New York)	797,166	1,078,755	45	41,051	39	242,889	56
89	92	**Dynalectron** (McLean, Va.)	749,067	295,373	88	13,112	67	128,332	78
90	96	**Hardware Wholesalers** (Fort Wayne, Ind.)[9,13]	747,253	210,423	94	N.A.		75,916	88
91	90	**Hilton Hotels** (Beverly Hills, Calif.)	740,366	1,302,273	36	97,839	21	707,352	26
92	99	**Bindley Western Industries** (Indianapolis)	711,021	202,347	96	4,340‡	76	44,684	96
93	95	**Caesars World** (Los Angeles)[19]	688,225	767,203	61	41,017	40	269,774	52
94	•	**M.D.C. Holdings** (Denver)	674,564	1,245,615	37	35,722	45	218,868	60
95	100	**American Hardware Supply** (Butler, Pa.)[9,13]	669,653	195,666	98	N.A.		56,669	93
96	84	**GATX** (Chicago)	668,600¶	2,234,400	27	28,700	48	211,000	63
97	•	**Ryland Group** (Columbia, Md.)	666,205	383,524	79	26,051	50	104,109	83
98	•	**Charter Medical** (Macon, Ga.)[5]	666,186	924,533	51	43,655	38	225,928	58
99	•	**Ramada** (Phoenix)	661,684	844,143	55	10,275	70	301,532	51
100	91	**Southern States Cooperative** (Richmond)[9,13]	660,266	325,282	84	N.A.		27,560	100
		TOTALS	194,214,680	147,852,651		4,906,767		53,177,826	

● Not on last year's list.

¶ Includes sales from discontinued operations of at least 10%.

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.

‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[14] Financial subsidiaries would add 25% or more to sales if consolidated.

THE SERVICE 500

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		SALES		STOCKHOLDERS' EQUITY					1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
14,000	40	10.3	9	18.3	19	1.90	1.60	0.25	22.32	8	41.60	12	36.60	9
13,000	44	—		—		(7.47)‡	(2.69)‡	3.23	—		(5.00)	59	3.04	76
2,282	84	1.2	59	12.1	45	1.20	1.10	N.A.	—		15.32	36	—	
3,800	73	1.2	60	9.0§	58	1.85	1.72	0.82	8.48	45	14.76	39	17.17	51
20,000	27	8.8	12	15.9	27	1.45	1.23	0.32	16.40	18	20.84	28	18.70	45
8,700	56	—		—		(0.44)	1.40	0.65	—		51.09	7	21.16	33
12,616	45	0.8	67	2.0	76	0.27	0.01	3.91	(23.46)	66	(5.05)	60	(7.29)	81
10,700	50	1.1	62	8.9	59	1.01‡	2.03	0.44	8.60	43	(16.48)	72	17.92	49
5,578	64	7.4	15	14.8	31	2.96	2.47	0.93	12.27	33	15.21	38	13.78	60
12,161	48	2.0	46	4.0	71	1.05‡	(2.18)	5.73	(15.61)	64	48.72	8	4.88	75
32,000	17	5.3	26	39.6	4	8.57‡	(0.27)	0.81**	26.66	5	(65.12)	86	18.36	48
12,291	47	2.9	38	102.1	2	1.00	1.00	0.17	19.43	13	(0.15)	53	26.45	18
3,400	77	5.5	24	18.7	18	1.55	0.27	N.A.	—		(15.18)	70	—	
2,253	85	—		—		N.A.	N.A.	N.A.	—		—		—	
5,700	63	2.4	43	22.0	16	6.00	2.73	1.51	14.79	27	26.19	21	21.15	34
38,000	12	11.4	6	30.2	8	6.15	(1.16)	4.76	2.60	54	26.95	19	18.64	47
4,600	70	0.8	68	9.6	56	1.24	1.79	1.03	1.88	57	13.69	40	19.82	41
4,600	69	3.5	36	24.6	11	2.27	2.01	0.35	20.49	12	6.71	45	37.01	8
6,622	61	—		—		(0.47)‡	1.63	1.05	—		(1.36)	55	9.77	66
4,498	72	—		—		N.A.	N.A.	N.A.	—		—		—	
3,400	76	—		—		(1.67)	0.32	0.65	—		66.33	1	24.21	25
4,700	67	—		—		(0.26)	1.14	0.25	—		46.12	10	32.74	15
7,000	57	0.5	75	1.9	77	0.13	0.75	N.A.	—		(25.60)	82	—	
6,815	60	1.6	53	6.7	64	0.99‡	0.21	2.01	(6.85)	61	13.34	41	6.35	70
950†	95	—		—		—	—	—	—		—		—	
1,702	89	1.7	49	3.7	66	(2.05)	(0.26)	0.17	—		(2.17)	56	7.36	69
3,047	79	1.6	52	9.7	55	1.60	1.06	0.37	15.68	23	(3.51)	58	18.70	46
4,997	65	8.3	13	14.4	35	2.31	3.21	0.92	9.58	39	(18.70)	76	12.88	62
932	96	9.1	11	22.5	15	1.91	2.15**	0.08	36.65	3	(16.83)	73	47.74	4
3,477	75	4.5	31	14.7	32	2.40	2.56	0.58	15.26	25	(15.03)	69	20.61	36
8,726	55	1.0	63	4.5	69	0.97	1.61	N.A.	—		(18.38)	75	—	
15,600	38	2.9	40	11.2	49	1.69	2.02	0.51	12.73	31	26.12	22	19.69	43
1,500	90	2.5	41	11.0	51	0.79	0.90	0.11**	22.17	10	(11.16)	65	38.70	7
891	97	—		—		N.A.	N.A.	N.A.	—		—		—	
725	99	1.7	51	38.5	5	2.64	2.76	0.36	22.03	11	62.31	3	26.57	17
1,350	91	—		—		N.A.	N.A.	N.A.	—		—		—	
3,000†	80	0.6	72	5.9	67	1.56	(5.64)	2.06	(2.74)	59	(2.90)	57	19.79	42
12,600	46	5.2	27	16.9	23	1.87	1.67	0.63	11.58	35	30.48	15	25.24	24
15,200	39	1.8	49	10.2	52	1.23	0.34	0.36	13.07	30	(0.02)	52	15.57	56
745†	98	—		—		N.A.	N.A.	N.A.	—		—		—	
35,000	14	13.2	2	13.8	38	3.92	4.03	1.10	13.50	29	6.46	46	23.83	26
355	100	0.6	73	9.7	54	0.67	0.79	N.A.	—		30.26	16	—	
9,736	53	6.0	23	15.2	29	1.36	1.07	(0.48)	—		18.75	31	35.83	10
1,217	92	5.3	25	16.3	24	1.81	1.74	N.A.	—		15.29	37	54.36	2
1,010	93	—		—		N.A.	N.A.	N.A.	—		—		—	
1,900	87	4.3	32	13.6	39	2.40	(3.88)	2.60	(0.51)	58	3.00	49	6.17	71
2,075	86	3.9	34	25.0	10	2.02	1.27	0.45	16.20	20	37.58	13	20.48	38
13,400	43	6.6	17	19.3	17	1.40	1.37	0.06	36.75	2	(13.68)	68	50.95	3
18,600	30	1.6	54	3.4	74	0.27	0.46**	0.20	3.05	53	(11.67)	66	5.26	74
2,550†	82	—		—		N.A.	N.A.	N.A.	—		—		—	
1,741,361														

[15] Company spun off from Alco Standard (No. 7 on Diversified Service list).

[16] Company was No. 228 on last year's FORTUNE 500 Industrials.

[17] Company was No. 197 on last year's FORTUNE 500 Industrials.

[18] Figures are for fiscal year ended April 30, 1986.

[19] Figures are for fiscal year ended July 31, 1986.

[20] Name changed from Parker Pen February 1, 1986.

THE 100 LARGEST COMMERCIAL BANKING COMPANIES

RANK 1986	RANK 1985	COMPANY	ASSETS[1] $ THOUSANDS	DEPOSITS $ THOUSANDS	DEPOSITS RANK	LOANS[2] $ THOUSANDS	LOANS RANK	NET INCOME $ THOUSANDS	NET INCOME RANK
1	1	**Citicorp** (New York)	196,124,000	114,689,000	1	129,206,000	1	1,058,000	1
2	2	**BankAmerica Corp.** (San Francisco)	104,189,000	82,205,000	2	71,783,000	2	(518,000)	100
3	3	**Chase Manhattan Corp.** (New York)	94,765,815	66,002,844	3	65,154,782	3	585,363	3
4	5	**J.P. Morgan & Co.** (New York)	76,039,000	42,960,000	5	33,783,000	9	872,500	2
5	4	**Manufacturers Hanover Corp.** (New York)	74,397,389	45,544,277	4	55,264,518	4	377,189	7
6	7	**Security Pacific Corp.** (Los Angeles)	62,606,000	39,408,000	8	43,586,000	5	385,900	6
7	6	**Chemical New York Corp.**	60,564,123	39,054,910	7	38,756,475	6	402,431	5
8	8	**Bankers Trust New York Corp.**	56,419,945	29,535,520	10	28,610,057	10	427,912	4
9	9	**First Interstate Bancorp** (Los Angeles)	55,421,736	39,457,006	6	33,987,675	8	337,934	8
10	13	**Wells Fargo & Co.** (San Francisco)	44,577,100	32,992,800	9	36,037,100	7	273,500	11
11	10	**First Chicago Corp.**	39,147,996	27,024,943	11	24,825,398	11	276,202	9
12	11	**Mellon Bank Corp.** (Pittsburgh)	34,499,370	21,647,152	13	23,034,755	13	183,253	18
13	14	**Bank of Boston Corp.**	34,045,409	21,724,988	12	23,624,992	12	232,764	14
14	12	**Continental Illinois Corp.** (Chicago)	32,809,000	18,032,000	16	20,207,000	14	165,200	20
15	15	**First Bank System** (Minneapolis)	28,012,000	16,261,000	22	14,640,000	19	202,900	15
16	23	**NCNB Corp.** (Charlotte, N.C.)	27,472,434	18,519,315	15	15,528,982	18	198,765	16
17	32	**First Union Corp.** (Charlotte, N.C.)	26,820,240	17,003,549	21	13,799,947	22	274,347	10
18	24	**SunTrust Banks** (Atlanta)	26,165,455	21,284,007	14	16,642,080	16	245,118	12
19	16	**Marine Midland Banks** (Buffalo and New York)[4]	24,789,596	17,418,418	20	18,420,839	15	144,944	27
20	20	**Irving Bank Corp.** (New York)	24,232,521	15,327,955	24	13,793,148	23	128,107	30
21	28	**Bank of New England Corp.** (Boston)	22,472,935	17,676,987	18	15,965,000	17	171,803	19
22	26	**PNC Financial Corp** (Pittsburgh)	22,198,930	14,315,971	28	12,397,404	29	237,382	13
23	18	**MCorp** (Dallas)	21,887,000	17,492,000	19	14,560,000	20	(82,000)	96
24	21	**Norwest Corp.** (Minneapolis)	21,539,400	14,099,800	30	13,033,900	26	121,700	32
25	31	**NBD Bancorp** (Detroit)	21,176,031	15,011,323	26	11,151,316	32	145,805	26
26	17	**RepublicBank Corp.** (Dallas)	20,944,300	15,997,462	23	14,482,029	21	53,969	63
27	27	**Bank of New York Co.**	20,708,850	15,112,849	25	13,569,292	25	155,218	24
28	34	**Barnett Banks of Florida** (Jacksonville)	20,228,949	17,736,767	17	13,692,107	24	157,495	22
29	22	**Texas Commerce Bancshares** (Houston)	19,192,000	14,139,000	29	12,696,000	27	20,000	92
30	35	**Citizens & Southern Georgia Corp.** (Atlanta)	18,757,413	14,026,053	31	11,572,829	31	155,848	23
31	29	**First Wachovia Corp.** (Winston-Salem, N.C.)	18,689,550	13,780,612	32	11,583,289	30	193,780	17
32	19	**InterFirst Corp.** (Dallas)	17,986,000	14,878,000	27	12,565,000	28	(326,500)	98
33	33	**Republic New York Corp.**	17,464,897	10,797,367	36	4,260,435	72	135,560	28
34	36	**First Fidelity Bancorp.** (Newark, N.J.)	15,170,304	12,054,723	33	8,938,839	37	119,543	33
35	46	**Sovran Financial Corp.** (Norfolk, Va.)	14,952,156	11,610,599	34	9,797,520	33	147,956	25
36	38	**CoreStates Financial Corp** (Philadelphia)	14,595,402	10,636,974	38	9,610,831	34	123,601‡	31
37	37	**National City Corp.** (Cleveland)	14,107,259	10,427,356	39	8,956,440	36	134,953	29
38	53	**Hartford National Corp.**	13,879,294	10,778,917	37	8,108,087	39	114,000	34
39	30	**First City Bancorp. of Texas** (Houston)	13,681,179	11,045,079	35	9,576,847	35	(401,962)	99
40	40	**Banc One Corp.** (Columbus, Ohio)	12,661,767	10,195,497	40	8,403,864	38	164,738	21
41	39	**Southeast Banking Corp.** (Miami)	12,468,984	9,555,874	41	7,375,027	41	86,522	40
42	41	**Midlantic Banks** (Edison, N.J.)	11,873,756	9,033,834	43	7,885,236	40	112,795	35
43	65	**Fidelcor** (Philadelphia)	11,391,725	9,026,105	44	6,442,936	49	92,267	37
44	49	**Norstar Bancorp** (Albany, N.Y.)	11,132,015	9,009,416	45	6,529,659	48	104,830	36
45	44	**National Westminster Bank USA** (New York)[5]	11,080,016	8,784,311	46	7,251,452	42	67,673	54
46	57	**AmeriTrust Corp.** (Cleveland)	11,068,113	7,972,168	49	7,201,689	43	88,480	39
47	43	**Valley National Corp.** (Phoenix)	10,715,497	9,186,694	42	7,173,378	44	83,222	43
48	55	**Shawmut Corp.** (Boston)	10,697,446	7,751,252	50	6,762,034	47	78,642	46
49	48	**Harris Bankcorp** (Chicago)[6]	10,277,701	7,600,616	52	5,702,785	55	68,167	53
50	45	**Comerica** (Detroit)	9,982,511	8,310,549	47	5,783,776	54	61,911	56

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.

‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[1] As of December 31, 1986. All companies on the list must have more than 80% of their assets in chartered commercial banking institutions.

[2] Net of unearned discount and loan loss reserve. Figure includes lease financing.

[3] Figure is for Sun Banks.

[4] Company is 52% owned by Hongkong & Shanghai Banking Corp. (No. 27 among last year's Largest International Banks).

STOCKHOLDERS' EQUITY		EMPLOYEES		NET INCOME AS PERCENT OF EQUITY		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
									1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
$ THOUSANDS	RANK	NUMBER	RANK	PERCENT	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
9,060,000	1	88,500	1	11.6§	63	7.14	7.12	3.21	8.32	66	12.29	38	10.89	79
4,038,000	4	73,465	2	—		(3.74)	(2.68)	2.41	—		(6.40)	82	(1.80)	88
4,280,310	3	47,480	3	13.6§	40	6.63	6.39	1.81	13.83	29	4.75	60	16.55	64
5,130,000	2	14,518	16	17.0	6	4.74	3.90	1.26	14.17	27	32.73	7	17.15	60
3,766,354	5	30,316	6	10.0	77	7.99	8.38	4.82	5.18	76	2.62	66	9.41	80
2,875,000	7	35,095	5	13.1§	47	4.86	4.35	1.24	14.61	25	13.14	35	20.36	44
3,119,854	6	20,993	8	12.9	49	7.57	7.33	2.84	10.28	55	(1.78)	75	16.60	63
2,721,300	9	11,069	22	15.7	15	6.01	5.39	1.16	17.83	12	27.43	12	24.39	14
2,759,749	8	35,410†	4	12.3	56	7.19	6.84	2.45	11.35	45	2.87	65	16.15	66
2,342,700	11	21,500	7	11.7	62	5.03	4.15	1.58	12.28	40	65.04	2	20.60	43
2,347,377	10	13,884	17	11.8	61	4.70	2.84	2.67	5.82	75	1.38	67	8.55	81
1,818,982	13	19,800	10	9.5§	81	6.20	7.13	3.27	6.61	71	11.31	40	13.06	76
1,769,309	14	20,000	9	13.2	46	3.69	5.64	0.80	16.55	14	33.50	6	22.43	27
2,048,000	12	9,477	29	8.1	85	0.60	0.53**	3.64	(16.50)	87	(45.37)	88	(11.21)	92
1,417,000	17	9,970†	26	14.3	29	3.42	2.84	1.06	12.37	39	23.93	15	14.50	72
1,308,864	20	12,107	20	15.2§	22	2.53	2.30	0.60	15.48	21	(1.92)	76	18.79	52
1,602,479	15	19,266	12	17.1	3	2.53	2.16	0.61	15.25	22	15.10	29	27.34	4
1,507,858	16	19,711	11	16.3	12	1.86	1.67	0.31[3]	19.48	9	7.46	54	20.79	42
1,368,730	19	12,031†	21	10.6	74	7.19	6.06	1.04	21.33	5	25.28	14	22.64	26
1,052,347	31	10,200	25	12.2	58	6.83	6.14	2.43	10.86	51	8.31	51	20.28	45
1,152,163	26	14,827	15	14.9	25	3.52	3.11	0.80[5]	15.97	19	14.97	31	25.16	10
1,389,970	18	9,328†	30	17.1	5	4.44	3.88	1.24[6]	13.63	30	21.84	19	20.98	39
1,146,000	27	8,472	35	—		(2.21)	3.02	1.50	—		(46.96)	89	2.81	87
1,303,500	21	15,526	14	9.3	82	3.64	3.20	2.61	3.36	79	22.17	18	8.43	82
1,158,007	25	11,038	23	12.6	52	3.87	3.20	1.43	10.44	53	13.13	36	21.34	36
1,221,320	22	8,008	37	4.4	91	1.65	4.72	2.26	(3.08)	83	(39.28)	86	5.00	85
1,052,519	30	9,304	31	14.8	27	4.97	4.26	1.84	10.47	52	18.69	23	20.10	46
1,035,763	32	16,902	13	15.2	20	2.91	2.65	0.48	19.67	8	7.05	56	25.88	7
1,160,000	24	8,298†	36	1.7	92	0.61	1.62	1.67	(9.61)	85	0.96	68	7.41	83
1,091,336	29	13,319	18	14.3	30	2.63	2.38	0.50	18.06	10	23.22	16	16.61	62
1,177,429	23	12,887	19	16.5	10	3.59	3.51	1.20[7]	11.53	44	9.85	47	17.75	56
844,000	38	8,636	34	—		(4.86)	0.91	1.51	—		(54.31)	92	(8.56)	90
1,136,034	28	2,850	97	11.9§	60	4.44	3.98	1.18	14.19	26	73.91	1	30.50	2
890,397	35	9,900	28	13.4	41	4.12	3.58	1.43	11.17	47	18.91	22	20.86	40
864,335	37	10,961	24	17.1	4	3.48	3.50	1.22	11.07	50	8.49	50	21.82	33
978,877	33	7,716	39	12.6	51	2.94‡	6.05	1.20	9.33	58	15.98	26	23.49	19
880,390	36	9,013	32	15.3	19	3.44	3.03	1.51	8.57	63	44.49	4	15.54	70
761,462	42	7,500	41	15.0	23	2.90	2.77	0.65	16.15	17	10.97	41	23.31	21
560,959	56	7,612	40	—		(12.70)	0.75	1.72	—		(73.49)	93	(10.42)	91
960,359	34	9,945	27	17.2	2	2.29	2.01	0.62	13.96	28	0.70	70	22.37	28
666,284	46	6,800	45	13.0	48	3.00	2.27	0.74	15.02	23	6.94	57	18.23	54
669,672	45	7,394	43	16.8	7	5.58	4.82	0.83	20.94	6	(5.14)	80	24.96	12
694,364	43	5,681	55	13.3	45	3.95	3.95	1.38	11.13	48	16.18	25	16.54	65
763,864	41	8,679	33	13.7§	39	2.87	2.54	1.39	7.51	69	(4.70)	79	18.96	51
621,044	50	4,644	68	10.9	70	N.A.	N.A.	N.A.	—		—		—	
828,200	39	5,811	53	10.7	72	4.28	4.30	2.29	6.47	73	10.44	42	15.41	71
592,518	53	7,321	44	14.1	32	4.97	4.60	1.39	13.62	32	(3.89)	78	15.83	68
633,691	47	6,729	46	12.4	55	5.07	5.17	1.05	17.02	13	13.27	33	25.84	8
689,949	44	4,893	64	9.9	78	10.22	8.63	5.08	7.24	70	—		—	
559,458	58	5,877	52	11.1	69	5.45	4.85	2.90	6.52	72	10.09	44	15.63	69

[5] Figure is for CBT.
[6] Figure is for Pittsburgh National.
[7] Figure is for Wachovia.
[8] Wholly owned by National Westminster Bank (No. 9 among last year's Largest International Banks).
[9] Wholly owned by a subsidiary of Bank of Montreal (No. 33 among last year's Largest International Banks).

THE 100 LARGEST COMMERCIAL BANKING COMPANIES

RANK 1986	RANK 1985	COMPANY	ASSETS[1] $ THOUSANDS	DEPOSITS $ THOUSANDS	DEPOSITS RANK	LOANS[2] $ THOUSANDS	LOANS RANK	NET INCOME $ THOUSANDS	NET INCOME RANK
51	62	**Boatmen's Bancshares** (St. Louis)	9,919,003	7,472,492	53	5,036,488	61	78,052	47
52	47	**Union Bancorp** (Los Angeles)[10]	9,901,273	7,744,176	51	6,918,061	46	48,329	72
53	42	**Allied Bancshares** (Houston)	9,863,646	8,103,275	48	6,227,850	51	(17,593)	95
54	56	**Maryland National Corp.** (Baltimore)	9,513,341	6,350,913	62	7,008,274	45	91,756	38
55	51	**U.S. Bancorp** (Portland, Ore.)	9,491,354	5,762,464	69	5,474,646	58	77,165	48
56	58	**Signet Banking Corp.** (Richmond)[11]	9,471,496	6,664,928	60	5,894,151	53	86,277	41
57	54	**United Virginia Bankshares** (Richmond)	9,412,574	6,896,462	57	6,422,051	50	81,927	45
58	52	**Rainier Bancorp.** (Seattle)	9,216,090	6,630,999	61	6,152,313	52	70,023	51
59	59	**Northern Trust Corp.** (Chicago)	9,090,107	6,207,109	64	3,924,590	75	52,290	68
60	61	**KeyCorp** (Albany, N.Y.)	9,072,750	7,390,982	54	5,458,138	59	82,190	44
61	50	**Society Corp.** (Cleveland)	9,060,948	7,327,461	55	5,514,160	57	84,122	42
62	63	**Manufacturers National Corp.** (Detroit)	8,110,207	6,159,383	65	4,681,938	64	60,009	59
63	93	**United Jersey Banks** (Princeton)	8,023,961	6,672,853	59	4,987,595	62	71,505	49
64	79	**First of America Bank Corp.** (Kalamazoo, Mich.)	7,869,918	6,927,313	56	4,589,557	65	52,904	66
65	71	**Huntington Bancshares** (Columbus, Ohio)	7,717,915	5,952,839	66	4,797,545	63	64,691	55
66	60	**Michigan National Corp.** (Farmington Hills, Mich.)	7,672,215	6,759,164	58	5,692,315	56	52,220	69
67	70	**BayBanks** (Boston)	7,627,668	6,348,201	63	5,180,258	60	58,852	60
68	74	**First American Bankshares** (Washington, D.C.)	7,209,709	5,917,510	67	4,307,889	69	41,100	79
69	67	**State Street Boston Corp.**	7,189,818	5,269,596	72	2,127,135	100	71,395	50
70	68	**First Wisconsin Corp.** (Milwaukee)	7,090,197	5,666,903	70	4,285,972	70	52,694	67
71	73	**Florida National Banks of Florida** (Jacksonville)	6,876,822	5,816,445	68	4,391,127	66	34,389	86
72	72	**Meridian Bancorp** (Reading, Pa.)	6,801,115	5,453,125	71	4,266,467	71	69,100	52
73	66	**European American Bancorp** (New York)[12]	6,744,465	4,539,610	80	3,968,490	74	21,123	91
74	64	**Mercantile Bancorp.** (St. Louis)	6,586,179	5,057,652	76	4,357,432	67	55,264	61
75	76	**Riggs National Corp.** (Washington, D.C.)	6,253,385	4,988,877	77	2,881,988	91	35,623	84
76	88	**Marshall & Ilsley Corp.** (Milwaukee)	6,000,935	4,331,830	86	2,830,441	93	55,018	62
77	77	**California First Bank** (San Francisco)[13]	5,995,907	5,268,106	73	4,183,478	73	30,733	87
78	69	**Texas American Bancshares** (Fort Worth)	5,985,740	5,152,193	75	4,313,836	68	(115,159)**	97
79	87	**First American Corp.** (Nashville)	5,950,777	4,676,966	79	3,501,289	81	53,294	65
80	82	**AmSouth Bancorp.** (Birmingham, Ala.)	5,942,706	4,449,827	83	3,818,702	77	61,012	57
81	90	**Dominion Bankshares** (Roanoke, Va.)	5,920,662	4,460,769	82	3,899,528	76	47,420	74
82	75	**First Pennsylvania Corp.** (Philadelphia)	5,887,589	3,998,842	90	3,605,071	79	36,625**	81
83	78	**Bank of Tokyo Trust** (New York)[14]	5,874,302	5,168,657	74	2,790,918	95	30,356	88
84	83	**Centerre Bancorp.** (St. Louis)	5,664,526	3,983,641	91	2,844,316	92	30,125	89
85	95	**Old Kent Financial Corp.** (Grand Rapids, Mich.)	5,582,276	4,863,209	78	3,075,818	87	60,585	58
86	81	**First Tennessee National Corp.** (Memphis)	5,555,707	4,250,695	87	3,145,320	85	47,446	73
87	91	**First Maryland Bancorp** (Baltimore)	5,487,202	3,906,087	94	3,725,441	78	36,054	82
88	●	**First National Bancorp** (Baltimore)	5,487,202	3,906,087	95	3,491,947	82	36,054	83
89	89	**Continental Bancorp** (Philadelphia)	5,311,046	4,508,373	81	3,539,007	80	34,739	85
90	85	**Commerce Bancshares** (Kansas City, Mo.)	5,293,463	4,441,591	84	2,695,130	97	39,178	80
91	100	**First Kentucky National Corp.** (Louisville)	5,128,486	3,657,002	98	2,940,760	90	50,061	70
92	94	**Indiana National Corp.** (Indianapolis)	5,106,296	3,815,917	96	3,166,236	84	43,008	78
93	98	**SouthTrust Corp.** (Birmingham, Ala.)	5,101,073	3,973,842	92	2,981,011	88	53,737	64
94	80	**First Security Corp.** (Salt Lake City)	5,079,578	3,923,672	93	3,335,765	83	5,093	93
95	92	**Bancorp Hawaii** (Honolulu)	5,060,018	4,342,847	85	2,784,395	96	46,185	76
96	●	**First Florida Banks** (Tampa)	4,845,177	4,043,714	89	2,793,667	94	47,152	75
97	86	**United Banks of Colorado** (Denver)	4,836,872	3,705,554	97	2,583,582	99	22,606	90
98	96	**Louisiana Bancshares** (Baton Rouge)	4,740,502	4,046,520	88	2,658,363	98	(6,318)	94
99	97	**South Carolina National Corp.** (Columbia)	4,740,286	3,327,023	99	3,077,590	86	43,781	77
100	●	**Citizens Fidelity** (Louisville, Ky.)	4,737,125	3,294,601	100	2,964,923	89	48,925	71
		TOTALS	1,937,181,118	1,346,715,136		1,218,950,175		10,954,844	

● Not on last year's list.

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.

§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[10] Wholly owned by Standard Chartered Bank (No. 54 among last year's Largest Commercial Banking Companies Outside the U.S.)

[11] Name changed from Bank of Virginia July 14, 1986.

[12] Figure is for American Bank & Trust.

[13] Wholly owned by six European banks, all of which were ranked last year on FORTUNE's list of the Largest International Banks.

[14] Company is 77% owned by Bank of Tokyo (No. 21 among last year's Largest International Banks).

[15] Wholly owned by Bank of Tokyo.

STOCKHOLDERS' EQUITY		EMPLOYEES		NET INCOME AS PERCENT OF EQUITY		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
									1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
$ THOUSANDS	RANK	NUMBER	RANK	PERCENT	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
621,108	49	5,600	56	12.6	53	4.00	4.40	1.30	11.94	42	(0.17)	72	21.48	35
775,668	40	4,539	70	6.2	89	N.A.	N.A.	N.A.	—		—		—	
613,158	52	3,350	89	—		(0.42)	2.95	0.62	—		(40.98)	87	12.04	78
541,729	59	7,497	42	16.5§	8	4.99	4.11	1.12	16.11	18	14.52	32	19.70	49
633,204	48	5,468	58	12.2	57	2.56	2.22	1.11	8.73	62	20.14	21	13.52	75
527,415	60	6,145	51	16.4	11	3.53	3.05	0.50	21.46	4	10.07	45	22.71	25
564,781	55	6,273	49	14.5	28	2.92	2.65	0.64	16.35	15	29.09	10	25.79	9
559,891	57	5,693	54	12.5	54	3.41	3.26	1.44	9.00	61	(1.04)	73	18.04	55
496,043	63	4,895	63	10.5	75	3.24	2.07	1.82	5.96	74	42.15	5	16.78	61
618,514	51	7,990	38	13.3	44	2.93	2.61	1.15	9.79	56	(9.91)	83	22.91	23
568,917	54	6,151	50	14.8	26	3.43	3.00	1.54	8.34	65	7.91	53	19.34	50
450,917	70	4,413	72	13.3	43	5.27	4.63	1.98	10.30	54	(0.10)	71	21.84	32
510,205	62	5,346	62	14.0	33	2.17	2.17	0.69	12.16	41	3.22	64	22.83	24
517,096	61	6,341	48	10.2§	76	5.47	5.19	1.67	12.62	36	0.72	69	24.32	16
470,995	65	4,855	65	13.7	38	2.65	2.42	0.81	12.56	37	3.42	62	23.86	17
462,157	68	6,500	47	11.3	65	3.59	2.64	2.62	3.21	80	6.13	58	13.69	73
420,370	72	5,565	57	14.0	34	4.10	3.81	0.90	16.34	16	23.03	17	25.03	11
418,522	73	4,353	73	9.8	80	N.A.	N.A.	N.A.	—		—		—	
392,364	76	5,352	61	18.2	1	1.97	1.60	0.19	26.43	2	14.99	30	36.24	1
466,806	66	5,373	60	11.3	66	2.53	2.10	0.76	12.71	35	12.91	37	23.06	22
430,571	71	4,739	67	7.8§	87	1.30	3.56	0.45	11.11	49	(12.64)	84	19.85	48
494,944	64	5,414	59	14.0	35	2.48	2.34	1.00[12]	9.47	57	15.10	28	25.90	6
359,747	78	3,261	92	5.9	90	N.A.	N.A.	N.A.	—		—		—	
458,904	69	4,572	69	12.0	59	3.57	3.49	1.69	7.74	68	7.31	55	16.13	67
333,435	86	1,989	99	10.7	71	2.65	2.59	1.11	9.07	59	(1.77)	74	21.20	37
351,915	79	4,808	66	15.6	16	2.95	2.66	1.02	11.20	46	9.68	48	23.41	20
311,105	94	3,942	82	9.9	79	2.61	2.26	1.79	3.86	78	3.40	63	18.45	53
257,183	100	3,022	94	—		(10.41)**	2.40	2.21	—		(49.88)	91	3.97	86
397,579	74	3,580	86	13.4	42	2.79	2.52	0.43	20.47	7	15.28	27	22.21	30
385,428	77	4,325	74	15.8	14	3.13	2.77	1.04	11.63	43	20.63	20	19.89	47
340,343	83	4,088	78	13.9	36	2.01	1.86	0.90	8.31	67	11.55	39	17.34	59
463,813	67	3,616	84	7.9	86	0.68**	0.35**	1.76	(9.07)	84	4.35	61	(3.22)	89
327,800	88	455	100	9.3	83	N.A.	N.A.	N.A.	—		—		—	
336,825	84	3,581	85	8.9	84	3.90	3.53	3.08	2.39	82	9.36	49	13.03	77
393,844	75	3,500	88	15.4	18	2.71	2.55	0.76	13.56	33	(2.74)	77	17.63	57
305,818	96	4,182	76	15.5	17	3.41	2.75	0.65	17.97	11	27.54	11	24.55	13
319,630	91	4,077	79	11.3	67	2.68	2.23	1.13	9.05	60	4.85	59	20.82	41
319,630	92	4,077	80	11.3	68	2.68	N.A.	N.A.	—		—		—	
326,901	89	3,000†	95	10.6	73	3.15	4.65	2.14	3.92	77	29.23	9	21.75	34
343,856	82	3,997	81	11.4	64	3.75	3.61	1.65	8.56	64	13.19	34	17.58	58
303,495	99	4,474	71	16.5	9	2.31	2.08	0.64	13.63	31	18.40	24	22.12	31
333,957	85	2,917	96	12.9	50	3.49	3.35	0.07	47.49	1	10.23	43	23.84	18
350,684	81	3,700	83	13.8	37	2.26	1.99	0.70	12.50	38	26.62	13	22.21	29
351,219	80	4,313	75	1.5	93	0.41	1.56	2.15	(15.27)	86	8.04	52	5.65	84
303,908	97	3,281	90	15.2	21	5.07**	4.31	1.49	13.02	34	45.23	3	21.09	38
315,845	93	3,513†	87	14.9	24	2.97	3.04	0.35	23.72	3	(5.37)	81	29.82	3
328,987	87	3,239	93	6.9	88	1.95	3.47	1.47	2.87	81	(23.69)	85	13.63	74
319,833	90	3,277	91	—		(0.26)	1.20	0.66	—		(49.12)	90	—	
308,652	95	4,131	77	14.2	31	2.05	1.48	0.52	14.78	24	9.89	46	24.34	15
303,635	98	2,204†	98	16.1	13	2.54	2.92	0.58	15.90	20	29.26	8	26.18	5
104,927,423		1,011,636												

THE 50 LARGEST DIVERSIFIED FINANCIAL COMPANIES

RANKED BY ASSETS

RANK 1986	RANK 1985	COMPANY	ASSETS[1] $ THOUSANDS	REVENUES[2] $ THOUSANDS	REVENUES RANK	NET INCOME $ THOUSANDS	NET INCOME RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	STOCKHOLDERS' EQUITY RANK
1	1	**Federal Nat'l Mortgage Ass'n** (Washington, D.C.)	100,406,000	10,540,000	5	183,000	25	1,593,000	13
2	2	**American Express** (New York)	99,476,000	14,652,000	4	1,250,000	1	5,726,000	1
3	●	**Salomon** (New York)[3]	78,164,000	6,789,000	10	516,000	7	3,454,000	6
4	3	**Aetna Life & Casualty** (Hartford)	66,829,900	20,482,900	1	1,043,100**	2	5,697,200	2
5	4	**Merrill Lynch** (New York)	53,013,471	9,606,349	7	454,349	8	2,875,514	8
6	6	**CIGNA** (Philadelphia)	50,015,800	17,064,100	2	817,300**	3	4,875,000	3
7	5	**First Boston** (New York)	48,618,206	1,309,765	33	180,555	26	958,780	23
8	7	**Travelers Corp.** (Hartford)	46,299,600	16,046,600	3	545,800	5	4,705,800	5
9	●	**Morgan Stanley Group** (New York)	29,190,361	2,463,484	24	201,250	23	797,571	25
10	8	**Bear Stearns Cos.** (New York)[4]	26,939,440	1,188,951	35	89,474	35	651,435	31
11	9	**E.F. Hutton Group** (New York)	25,921,257	3,504,927¶	16	(90,286)	49	733,484	28
12	11	**American International Group** (New York)	21,022,868	9,704,119	6	795,827	4	4,867,797	4
13	10	**Loews** (New York)	19,024,309	8,625,988	8	545,503	6	2,916,624	7
14	12	**Student Loan Marketing Ass'n** (Washington, D.C.)	18,232,065	1,376,785	32	144,559	29	654,805	30
15	15	**Lincoln National** (Fort Wayne)	16,243,838	5,998,713	12	284,392	12	2,196,594	12
16	13	**Transamerica** (San Francisco)	16,181,783	7,119,688	9	267,541	14	2,304,362	11
17	14	**Paine Webber Group** (New York)[5]	14,725,750	2,384,720	25	71,599	37	633,365	33
18	16	**Continental** (New York)	13,623,225	6,002,273	11	449,632	9	2,550,894	9
19	●	**Household International** (Prospect Heights, Ill.)[6]	13,206,600	3,825,400¶	14	208,600‡	22	1,161,600	21
20	21	**Fleet Financial Group** (Providence, R.I.)	11,690,346	1,207,513	34	136,744	30	770,654	26
21	17	**Kemper** (Long Grove, Ill.)	9,735,091	3,329,897	17	201,110	24	1,423,530	18
22	19	**Fireman's Fund** (Novato, Calif.)	9,178,000	3,699,000	15	228,000	18	1,560,000	16
23	20	**USF&G** (Baltimore)	8,935,993	4,336,783	13	296,330	11	1,576,161	14
24	23	**General Re** (Stamford, Conn.)	8,676,600	3,175,200	22	328,700	10	2,413,100	10
25	22	**St. Paul Cos.**	7,627,082	3,181,587	21	217,114**	20	1,440,565	17
26	24	**American Financial** (Cincinnati)	7,325,962	3,190,212	20	178,650	28	291,259	45
27	18	**Beneficial** (Wilmington, Del.)	7,274,200	1,659,200	29	(171,600)**	50	716,400	29
28	25	**Chubb** (Warren, N.J.)	7,226,748	3,208,761	19	267,941	13	1,575,531	15
29	26	**Reliance Group Holdings** (New York)	6,078,522	3,225,749	18	62,991‡	39	441,058	41
30	30	**Combined International** (Chicago)	5,904,802	1,805,626	27	247,249	15	1,142,005	22
31	28	**SAFECO** (Seattle)	5,781,799	2,518,977	23	228,687	17	1,299,690	20
32	27	**Home Group** (New York)	5,681,000	2,193,700	26	178,700**	27	812,800	24
33	42	**Integrated Resources** (New York)	5,136,668	832,879	40	18,048‡	45	505,711	38
34	29	**DCNY** (New York)	4,867,972	273,365	49	24,613	43	110,045	48
35	●	**BarclaysAmericanCorp.** (Charlotte, N.C.)	4,147,990	479,608	44	22,692	44	537,420	37
36	31	**Farmers Group** (Los Angeles)	3,196,834	1,119,922	38	213,470	21	1,398,294	19
37	32	**GEICO** (Washington, D.C.)	2,715,291	1,429,863	30	217,742	19	623,997	34
38	33	**Old Republic International** (Chicago)	2,628,300	1,143,500	37	67,700‡	38	426,700	42
39	37	**Southmark** (Dallas)[7]	2,516,027	534,411	43	94,289	33	753,121	27
40	35	**Ohio Casualty** (Hamilton)	2,475,392	1,415,268	31	102,714	31	606,002	35
41	40	**Lomas & Nettleton Financial** (Dallas)[7]	2,454,689	376,424	47	54,463	40	335,880	43
42	34	**Alexander & Alexander Services** (New York)	2,428,600	1,068,200	39	43,200	41	324,400	44
43	36	**Security Capital** (New York)[5]	2,306,709	277,616	48	(8,935)	46	59,226	50
44	38	**Hanover Insurance Cos.** (Worcester, Mass.)	1,891,002	1,162,135	36	96,962**	32	448,486	40
45	44	**Cincinnati Financial**	1,552,717	775,804	41	93,471	34	580,174	36
46	43	**United States Leasing International** (San Francisco)	1,525,783	434,060	46	29,303	42	276,917	46
47	46	**Alleghany** (New York)	1,515,635	623,414	42	79,465	36	497,241	39
48	49	**Marsh & McLennan Cos.** (New York)	1,476,600	1,804,100	28	243,200	16	638,700	32
49	45	**Frank B. Hall** (Briarcliff Manor, N.Y.)	1,255,685	438,392	45	(22,452)	48	101,600	49
50	48	**Southland Financial** (Irving, Tex.)	1,151,191	58,803	50	(16,330)	47	183,173	47
		TOTALS	903,493,703	199,665,731		11,712,426		73,223,665	

● Not on last year's list.

¶ Includes sales from discontinued operations of at least 10%.

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.

‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[1] Total assets shown as of December 31, 1986, unless otherwise noted. Only assets of consolidated subsidiaries are included. Holding companies engaged in commercial banking; savings; or life, health, and accident insurance are listed here only when assets of those businesses represent less than 80% of the company's total.

THE SERVICE **500**

EMPLOYEES		NET INCOME AS PERCENT OF EQUITY		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
							1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
PERCENT	RANK	NUMBER	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
2,300	44	11.5	41	2.49	0.52	2.62	(0.51)	33	58.39	3	13.22	37
78,747	1	21.8	8	5.55	3.55	1.35	15.18	10	9.31	23	15.41	31
7,800	29	14.9	29	3.45	3.78	0.97	13.55	18	(10.59)	38	22.81	13
45,100	4	18.3	14	9.12**	3.32	2.65	13.17	19	10.24	22	15.53	30
47,900	3	15.8	26	4.30	2.26	1.50	11.07	24	8.45	25	15.18	33
50,056	2	16.1§	23	9.92**	(10.77)	4.25	8.84	26	(10.76)	39	8.02	40
4,493	39	18.8	11	5.14	4.29	1.26	15.08	11	(1.75)	35	30.81	6
33,353	6	11.6	40	5.09	4.18	1.63	12.06	23	(2.75)	36	15.35	32
5,332	36	25.2	4	8.42	N.A.	N.A.	—		—		—	
5,650	35	13.7	34	1.11	N.A.	N.A.	—		14.98	15	—	
18,910	11	—		(2.90)	1.63	1.27	—		11.04	20	24.60	11
28,000	7	16.4	21	4.90	2.75	0.83	19.46	6	15.74	13	20.47	18
22,950	8	18.7	13	6.69	7.23	0.94	21.68	1	8.51	24	31.23	5
984	48	22.1	6	3.08	2.45	N.A.	—		79.64	1	—	
14,003	18	13.0	37	6.12	4.89	1.88	12.53	22	(3.96)	37	16.51	27
14,800	16	11.6	39	3.57	2.15	1.74	7.45	29	1.39	32	14.99	34
12,050	21	11.3	42	2.51	1.36	1.14	8.21	28	14.37	18	23.97	12
17,000	13	17.3§	17	7.42	1.01	2.01	13.92	16	0.56	34	13.25	36
21,400	9	17.1§	18	4.48‡	3.65	2.87	4.55	31	17.74	11	16.16	28
8,410	27	17.7	15	5.16	4.67	1.14	16.25	8	18.03	[illegible]	26.73	10
17,000	14	14.1	32	3.40	1.89	0.93	13.84	17	4.76	30	21.98	15
12,700	20	14.6	30	3.45	N.A.	N.A.	—		14.76	16	—	
9,000†	24	18.8	12	4.43	(1.81)	1.56	11.01	25	7.96	26	16.95	25
2,332	43	13.6	35	3.22	2.90	1.43	8.42	27	11.69	19	18.82	19
10,178	22	15.1	28	4.75**	2.35	1.25	14.28	15	4.35	31	13.44	35
44,300	5	52.1§	1	N.A.	N.A.	N.A.	—		—		—	
6,800	32	—		(8.30)**	3.82	4.52	—		18.56	9	15.54	29
9,600	23	17.0	19	7.05	1.92	2.08	12.98	20	10.57	21	18.56	21
8,500	26	14.3	31	0.50‡	N.A.	N.A.	—		—		—	
14,500	17	21.7	9	7.40	5.48	2.25	12.64	21	6.95	27	21.24	17
8,792	25	17.6	16	6.79	4.74	1.72	14.70	12	18.92	8	18.02	22
7,800	28	22.0	7	4.59**	(5.19)	N.A.	—		(14.29)	41	—	
3,168	42	3.6	45	(1.73)‡	2.04	0.19**	—		(12.12)	40	34.98	2
354	50	22.4	5	6.14	5.89	1.10	18.75	7	25.39	5	39.82	1
3,314	41	4.2	44	N.A.	N.A.	N.A.	—		—		—	
15,506	15	15.3	27	3.09	2.71	0.80	14.47	14	16.23	12	16.66	26
5,894	33	34.9	3	12.61	9.25	(1.51)	—		14.52	17	32.57	3
4,700	37	13.9§	33	3.55‡	1.20‡	2.94	1.89	32	(21.40)	43	18.68	20
13,500	19	12.5	38	1.39	1.51	N.A.	—		1.24	33	22.50	14
5,700	34	17.0	20	4.54	1.95	1.01	16.16	9	15.62	14	17.55	23
3,740	40	16.2	22	3.29	2.81	0.50	20.61	2	23.51	7	29.14	7
18,000†	12	13.3	36	1.05	(0.19)	1.28	(1.96)	34	(17.91)	42	8.27	39
1,135	47	—		(1.52)	1.74**	(2.10)‡	—		(57.95)	46	6.87	41
4,603	38	21.6	10	9.41**	2.27	1.52	20.02	4	24.41	6	27.77	9
1,600	46	16.1	24	6.08	3.64	0.94	20.56	3	6.18	28	28.93	8
1,750	45	10.6	43	3.97	3.39	1.98	7.20	30	5.39	29	17.47	24
7,000	30	16.0	25	12.36	13.31	2.01	19.92	5	70.88	2	31.97	4
19,975	10	38.1	2	3.30	2.23	0.85	14.49	13	53.14	4	21.52	16
7,000	31	—		(1.92)	(13.17)	1.67	—		(47.71)	45	0.35	42
780†	49	—		(0.97)	(0.44)	0.79	—		(33.83)	44	9.11	38
708,459												

[2] Total revenues during the year, including any consolidated non-financial revenues from manufacturing, retailing, etc., and revenues from discontinued operations when published. All companies on the list must have derived more than 50% of their revenues from financial businesses and have a publicly traded stock.

[3] Company was No. 1 among last year's Largest Diversified Service Companies as Phibro-Salomon. Name changed May 7, 1986.

[4] Figures are for fiscal year ended April 30, 1986.

[5] Figures are for fiscal year ended September 30, 1986.

[6] Company was No. 11 among last year's Largest Retailing Companies.

[7] Figures are for fiscal year ended June 30, 1986.

THE 50 LARGEST SAVINGS INSTITUTIONS

RANKED BY ASSETS

RANK		COMPANY	ASSETS[1]	DEPOSITS		LOANS[2]		NET INCOME	
1986	1985		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**Financial Corp. of America** (Irvine, Calif.)	33,952,994	16,929,388	3	11,650,995	6	95,369	9
2	3	**Great Western Financial Corp.** (Beverly Hills, Calif.)	27,630,183	18,130,530	2	21,970,955	1	300,786	2
3	2	**H. F. Ahmanson** (Los Angeles)	27,592,294	21,687,190	1	18,680,570	2	303,604	1
4	4	**CalFed** (Los Angeles)	21,552,900	15,486,500	4	15,912,600	3	164,400	5
5	5	**Meritor Financial Group** (Philadelphia)[3]	18,447,272	12,676,100	5	15,515,724	4	22,920**	34
6	6	**GLENFED** (Glendale, Calif.)[4,5]	16,387,444	11,660,817	6	13,140,320	5	88,295**	11
7	12	**Great American First Savings Bank** (San Diego)	13,064,815	8,877,414	7	8,877,743	7	93,745	10
8	7	**Golden West Financial Corp.** (Oakland)	12,435,350	7,698,523	9	7,986,984	9	183,808	4
9	10	**Gibraltar Financial Corp.** (Beverly Hills, Calif.)	12,248,615	6,001,205	14	4,773,050	16	49,077‡	19
10	9	**Home Federal Savings & Loan Ass'n** (San Diego)	12,074,620	8,562,059	8	1,232,040	49	103,358	7
11	8	**First Federal of Michigan** (Detroit)	11,271,916	5,047,913	18	4,778,940	18	73,023‡	12
12	11	**CityFed Financial Corp.** (Palm Beach, Fla.)	10,728,053	5,857,240	16	7,022,032	10	37,524	23
13	16	**Columbia Savings & Loan Ass'n** (Beverly Hills, Calif.)	10,222,652	5,192,585	17	1,817,752	41	193,526	3
14	14	**CrossLand Savings** (New York)	10,095,697	6,876,465	11	8,251,452	8	101,232**	8
15	15	**Coast Savings & Loan Ass'n** (Los Angeles)	9,725,362	5,931,131	15	5,508,974	14	50,377	16
16	13	**Imperial Corp. of America** (San Diego)	9,597,240	6,063,147	13	5,783,466	13	50,340	17
17	●	**Empire of America Federal Savings** (Buffalo)	9,095,241	7,352,759	10	6,803,587	11	66,638**	14
18	●	**Dime Savings Bank of New York** (Garden City)	8,366,595	6,691,224	12	6,355,896	12	130,612**	6
19	●	**TCF Banking & Savings** (Minneapolis)	6,517,650	3,405,961	24	2,735,217	28	21,401	38
20	19	**United Financial Group** (Houston)	6,464,869	3,101,427	30	1,680,699	43	(36,250)	48
21	22	**CenTrust Savings Bank** (Miami)[6]	6,142,788	3,400,244	25	3,385,492	22	55,906**	15
22	20	**Western Savings & Loan Ass'n** (Phoenix)	5,547,105	3,813,475	21	2,995,312	24	30,171	24
23	18	**Carteret Savings & Loan Ass'n** (Morristown, N.J.)[6]	5,537,547	4,165,587	19	4,536,160	17	46,091**	20
24	23	**Homestead Financial Corp.** (Burlingame, Calif.)	5,492,380	2,538,168	36	1,831,453	40	29,445‡	25
25	24	**Washington Mutual Savings Bank** (Seattle)	5,392,597	3,293,169	27	2,739,297	28	70,654	13
26	28	**Atlantic Financial Federal** (Bala Cynwyd, Pa.)[6]	5,208,146	3,842,627	20	4,158,606	18	16,453	43
27	21	**Florida Federal S&L Ass'n** (St. Petersburg)[5]	5,192,036	3,432,526	23	3,404,993	20	(65,461)	50
28	33	**American Capital Corp.** (Miami)	5,099,789	3,390,684	26	2,649,704	30	8,683	44
29	26	**Northeast Savings** (Hartford)[7]	5,075,023	3,186,573	28	3,970,037	19	37,804	22
30	25	**American Continental Corp.** (Phoenix)	4,575,171	2,821,375	33	987,827	50	24,333‡	29
31	35	**Financial Corp. of Santa Barbara** (Calif.)	4,557,952	2,005,337	47	1,377,903	47	19,088	40
32	27	**Perpetual Savings Bank** (Alexandria, Va.)[8]	4,349,333	3,105,930	29	2,335,991	32	20,629	39
33	30	**Howard Savings Bank** (Newark, N.J.)	4,294,392	3,704,461	22	2,741,612	27	24,049	30
34	32	**Pacific First Financial Corp.** (Tacoma)	4,097,364	2,096,648	44	2,354,255	33	23,469	31
35	●	**AmeriFirst Federal S&L Ass'n** (Miami)[6]	4,082,464	2,827,009	32	3,390,630	21	(47,847)‡	49
36	29	**Old Stone Corp.** (Providence)	3,876,453	2,690,056	34	3,251,940	23	29,051	26
37	31	**American Savings Bank** (New York)	3,833,200	2,943,771	31	2,981,894	25	40,570**	21
38	36	**Western Capital Investment Corp.** (Denver)	3,563,611	2,354,489	40	2,199,554	34	(7,169)	46
39	●	**Seamen's Corp.** (New York)	3,315,777	2,418,300	38	1,477,566	46	26,757	28
40	38	**Farm & Home Savings Ass'n** (Nevada, Mo.)	3,301,007	2,590,606	35	2,550,254	31	21,739	37
41	34	**Citadel Holding Corp.** (Glendale, Calif.)	3,273,977	2,400,294	39	2,847,889	26	29,030	27
42	41	**Commercial Federal Corp.** (Omaha)[5]	3,067,981	1,666,218	49	1,679,500	44	17,325	41
43	47	**Far West Financial** (Newport Beach, Calif.)	3,030,281	2,119,008	43	2,023,591	38	23,158	32
44	44	**Society for Savings** (Hartford)	2,948,366	2,228,376	41	2,030,258	37	23,036**	33
45	37	**Guarantee Financial Corp. of Calif.** (Fresno)	2,874,138	2,167,143	42	2,181,025	35	8,042	45
46	●	**Apple Bank for Savings** (New York)	2,699,331	2,451,764	37	1,969,296	39	22,487**	35
47	46	**First Columbia Financial Corp.** (Englewood, Colo.)[9]	2,696,460	1,650,724	50	1,246,752	48	(14,254)	47
48	48	**Great Lakes Fed. S&L Ass'n** (Ann Arbor, Mich.)	2,691,390	1,698,117	48	1,799,013	42	22,234	36
49	45	**Valley Federal S&L Ass'n** (Van Nuys, Calif.)	2,661,651	2,067,106	46	2,178,572	36	17,033	42
50	40	**American S&L Ass'n of Florida** (Miami)[6]	2,600,032	2,094,066	45	1,507,881	45	50,242**	18
		TOTALS	408,549,504	264,393,429		245,283,223		2,696,133	

● Not on last year's list.

** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.

‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[1] As of December 31, 1986. All companies on the list must have derived more than 80% of their assets from chartered thrift institutions and have a publicly traded stock.

[2] Net of unearned discount and loan loss reserve. Figure includes lease financing.

[3] Formed as a holding company for Philadelphia Savings Fund Society April 25, 1986.

STOCKHOLDERS' EQUITY $ THOUSANDS	RANK	EMPLOYEES NUMBER	RANK	NET INCOME AS PERCENT OF EQUITY PERCENT	RANK	EARNINGS PER SHARE 1986/$	1985/$	1976/$	1976-86 GROWTH RATE PERCENT	RANK	TOTAL RETURN TO INVESTORS 1986 PERCENT	RANK	1976-86 AVERAGE PERCENT	RANK
313,893	16	5,900	5	30.4	5	2.25	1.01**	0.18	28.52	3	(25.00)	36	24.45	5
1,598,811	2	11,909	1	18.8	19	7.02	5.02	2.20	12.30	8	37.97	10	15.84	11
1,677,418	1	10,162	2	18.1	20	3.22	2.63	1.00	12.40	7	36.18	11	20.09	7
1,168,900	3	6,800	4	14.1	28	7.03	6.02	N.A.	—		24.53	16	—	
970,171	4	5,662	6	2.4	44	0.65**	1.84	N.A.	—		(11.94)	32	—	
753,517	6	5,315	7	11.7	34	4.11**	2.64	N.A.	—		40.67	8	—	
545,096	10	3,394	11	17.2	23	4.18	2.43	N.A.	—		19.74	19	—	
651,170	7	2,612	14	28.2	7	5.89	5.14	0.93	20.29	6	13.02	22	26.10	3
331,101	15	2,416	15	14.8	27	2.66‡	2.34	1.23	8.00	9	2.57	26	7.20	13
801,069	5	3,640	9	12.9	30	4.87	3.53	N.A.	—		00.00	27	—	
361,622	13	2,214	19	20.2	14	6.58	5.31	N.A.	—		43.56	6	—	
356,956	14	6,870	3	7.8§	42	1.57	3.60	N.A.	—		(0.43)	28	—	
499,728	11	830	43	38.7	2	5.40	3.95	N.A.	—		5.99	25	27.37	2
643,327	8	2,639	13	1.6	45	6.34**	N.A.	N.A.	—		14.41	21	—	
399,249	12	1,731	25	12.6	33	3.84	1.63	N.A.	—		—		—	
226,313	24	3,000	12	22.2	13	3.55	(1.16)	2.98	1.77	13	34.15	12	3.60	15
218,240	27	3,840	8	30.5	4	4.24**	N.A.	N.A.	—		—		—	
564,559	9	3,500	10	23.1	12	N.A.	N.A.	N.A.	—		—		—	
211,792	28	1,800	24	10.1	37	3.00	N.A.	N.A.	—		—		—	
77,013	48	712	47	—		(4.55)	(0.50)	0.92	—		(73.08)	39	—	
296,807	18	1,882	23	18.8	18	7.84**	8.10	N.A.	—		—		—	
127,984	39	1,978	21	23.6	11	1.80	2.32	0.01	65.51	1	47.49	5	33.32	1
260,762	22	1,700	26	17.7	21	4.21**	2.73	N.A.	—		(15.38)	34	—	
118,067	40	926	40	24.9	10	2.51	1.63	0.13	34.60	2	25.69	15	—	
282,309	21	1,460	31	25.0	9	7.11	1.93	N.A.	—		104.66	1	—	
186,595	31	1,698	27	8.8	39	3.39	3.80	N.A.	—		(3.43)	29	—	
224,882	25	1,686	29	—		(6.99)	0.22	N.A.	—		(27.86)	37	—	
103,623	43	2,200	20	8.4	40	0.55	0.47	(1.97)	—		(42.59)	38	16.04	10
222,195	26	1,656	30	17.0	24	7.07	(2.08)	N.A.	—		(6.38)	30	—	
128,591	38	1,355	33	27.5	8	1.51‡	2.71	N.A.	—		10.51	23	24.96	4
38,651	49	810	44	49.4	1	3.16	0.83	1.81	5.74	10	21.13	17	4.79	14
256,059	23	1,402	32	6.5§	43	1.20	1.47	N.A.	—		—		—	
304,116	17	2,250	18	7.9	41	1.75	1.43	N.A.	—		8.27	24	—	
207,352	29	1,308†	34	11.3	35	3.14	(1.32)	N.A.	—		42.22	7	—	
104,466	42	2,373	16	—		N.A.	N.A.	N.A.	—		—		—	
184,527	32	2,300		15.7	26	3.32	3.07	2.31	3.69	11	26.29	14	18.82	8
291,380	19	1,038	37	13.9	29	6.11**	N.A.	N.A.	—		—		—	
286,898	20	1,956	22	—		(0.77)	2.07	N.A.	—		(11.38)	31	—	
85,785	47	458	50	31.2	3	1.89	N.A.	N.A.	—		—		—	
202,697	30	743	46	10.7	36	3.07	1.95	N.A.	—		—		—	
148,243	36	688	48	19.6	16	8.43	7.73	N.A.	—		49.82	4	—	
99,418	44	978	38	17.4	22	3.16	2.22	N.A.	—		40.56	9	—	
142,657	37	750	45	16.2	25	3.01	2.63	0.47	20.41	5	(14.38)	33	16.19	9
178,738	33	1,187	35	12.9	31	2.15**	1.37	N.A.	—		—		—	
86,419	45	1,696	28	9.3	38	1.31	2.32	1.03	2.41	12	20.83	18	15.58	12
176,584	34	930	39	12.7	32	4.90**	N.A.	N.A.	—		50.36	3	—	
22,066	50	639	49	—		(5.69)	(2.34)	N.A.	—		(20.48)	35	—	
111,817	40	842	41	19.9	15	5.67	3.21	N.A.	—		16.31	20	—	
82,069	47	1,171	36	19.3§	17	5.51	3.21	N.A.	—		28.45	13	—	
150,552	35	832	42	29.4§	6	6.11**	(6.76)	0.65	25.20	4	82.86	2	22.79	6
17,494,354		125,838												

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[4] Formed as a holding company for Glendale Federal Savings & Loan Association December 31, 1986.

[5] Figures are for fiscal year ended June 30, 1986.

[6] Figures are for fiscal year ended September 30, 1986.

[7] Figures are for fiscal year ended March 31, 1986.

[8] Figures are for fiscal year ended October 31, 1986.

[9] Figures are for fiscal year ended February 28, 1986.

THE 50 LARGEST LIFE INSURANCE COMPANIES

RANKED BY ASSETS

RANK 1986	RANK 1985	COMPANY	ASSETS[1] $ THOUSANDS	PREMIUM AND ANNUITY INCOME[2] $ THOUSANDS	RANK	NET INVESTMENT INCOME $ THOUSANDS	RANK
1	1	**Prudential of America** (Newark)*	103,317,115	17,380,277	1	6,221,946	2
2	2	**Metropolitan Life** (New York)*	81,581,350	12,148,965	2	6,705,678	1
3	3	**Equitable Life Assurance** (New York)*	48,577,698	5,500,913	4	2,733,134	5
4	4	**Aetna Life** (Hartford)[7]	42,957,155	10,506,887	3	3,130,175	3
5	5	**New York Life***	29,793,627	3,477,186	7	2,412,632	6
6	8	**Teachers Insurance & Annuity** (New York)	27,887,103	2,654,607	13	2,778,127	4
7	6	**John Hancock Mutual Life** (Boston)*	27,213,497	4,173,912	5	1,406,348	10
8	7	**Travelers** (Hartford)[8]	27,210,137	4,023,926	6	2,371,822	7
9	9	**Connecticut General Life** (Bloomfield)[9]	24,806,504	2,869,639	11	1,544,123	8
10	10	**Northwestern Mutual Life** (Milwaukee)*	20,187,343	2,934,270	9	1,439,008	9
11	11	**Massachusetts Mutual Life** (Springfield)*	18,027,848	2,487,919	14	1,338,391	12
12	12	**Principal Mutual Life** (Des Moines)*[10]	16,993,647	3,112,712	8	1,391,709	11
13	13	**New England Mutual Life** (Boston)*	12,827,256	2,769,876	12	1,019,988	13
14	14	**Mutual of New York***	11,248,982	2,197,790	15	723,087	16
15	19	**Executive Life** (Los Angeles)	9,870,910	1,615,782	21	800,593	15
16	15	**Mutual Benefit Life** (Newark)*	9,837,863	1,634,881	19	891,052	14
17	16	**Connecticut Mutual Life** (Hartford)*	8,934,017	1,763,712	17	645,224	18
18	17	**State Farm Life** (Bloomington, Ill.)	7,485,062	1,224,966	29	657,372	17
19	18	**IDS Life** (Minneapolis)[11]	7,301,941	1,213,298	31	580,540	19
20	21	**Variable Annuity Life** (Houston)	6,614,424	1,004,512	36	562,186	20
21	20	**Nationwide Life** (Columbus, Ohio)	6,444,987	1,013,129	35	386,565	24
22	26	**Aetna Life & Annuity** (Hartford)[7]	5,610,053	986,995	37	312,460	30
23	24	**Continental Assurance** (Chicago)[12]	5,601,469	1,488,613	25	178,575	49
24	25	**Pacific Mutual Life** (Newport Beach, Calif.)*	5,515,535	1,457,421	26	438,057	22
25	30	**New York Life & Annuity** (Wilmington, Del.)	5,481,656	1,489,552	24	483,440	21
26	23	**Southwestern Life** (Dallas)	5,435,187	1,218,986	30	181,840	48
27	22	**Lincoln National Life** (Fort Wayne)[13]	5,232,026	1,512,434	22	305,032	32
28	29	**Lincoln National Pension** (Fort Wayne)[13]	5,105,816	1,372,403	28	278,253	40
29	37	**Equitable Variable Life** (New York)	5,073,363	1,501,921	23	360,508	26
30	27	**Phoenix Mutual Life** (Hartford)*	4,719,181	757,021	40	312,479	29
31	38	**Transamerica Life & Annuity** (Los Angeles)[14]	4,651,502	2,931,496	10	412,221	23
32	47	**Provident National Assurance** (Chattanooga)	4,159,288	1,627,262	20	382,869	25
33	33	**Northwestern National Life** (Minneapolis)[19]	4,146,790	1,041,104	34	192,621	47
34	28	**Transamerica Occidental Life** (Los Angeles)[14]	4,070,794	1,453,705	27	298,289	33
35	34	**UNUM Life** (Portland, Me.)[15]	3,924,249	635,083	41	335,201	27
36	35	**State Mutual of America** (Worcester, Mass.)*	3,892,135	1,142,833	33	314,773	28
37	31	**Penn Mutual Life** (Philadelphia)*	3,841,006	391,569	49	279,515	39
38	49	**Allstate Life** (Northbrook, Ill.)[16]	3,789,407	1,895,041	16	279,908	38
39	39	**General American Life** (St. Louis)*	3,778,836	1,208,036	32	308,301	31
40	42	**Guardian of America** (New York)*	3,691,576	1,654,433	18	289,759	35
41	44	**Minnesota Mutual Life** (St. Paul)*	3,608,823	797,151	39	280,121	37
42	46	**Mutual of America Life** (New York)*	3,435,530	421,085	46	256,796	42
43	40	**Franklin Life** (Springfield, Ill.)[17]	3,433,524	448,035	44	292,198	34
44	45	**Kemper Investors Life** (Chicago)[18]	3,398,707	485,854	43	261,401	41
45	43	**National Life** (Montpelier, Vt.)*	3,390,588	488,273	42	215,625	44
46	36	**Western & Southern Life** (Cincinnati)*	3,365,027	423,088	45	206,436	46
47	32	**American General Life & Accident** (Nashville)	3,362,383	410,285	47	287,759	36
48	41	**American National** (Galveston, Tex.)	3,247,663	394,826	48	225,518	43
49	●	**National Investors Life** (Little Rock, Ark.)	3,226,474	382	50	148,989	50
50	●	**Home Life** (New York)*	3,064,892	897,967	38	210,775	45
		TOTALS	670,371,946	116,242,015		48,069,419	

Data for all companies are calculated on the statutory accounting basis required by state insurance regulatory authorities.

● Not on last year's list.

* Indicates a mutual company.

[1] As of December 31, 1986.

[2] Includes premium income from life, accident, and health policies, annuities, and contributions to deposit administration funds.

[3] After dividends to policyholders and federal income taxes, excluding capital gains and losses. Figures in parentheses indicate a loss.

[4] Face value of all life policies, including variable life insurance, as of December 31, 1986.

[5] Change between December 31, 1985, and December 31, 1986.

[6] Includes home office, field force, and full-time agents.

[7] Wholly owned by Aetna Life & Casualty (No. 4 on Diversified Financial list).

[8] Wholly owned by Travelers Corp. (No. 8 on Diversified Financial list).

THE SERVICE 500

	NET GAIN FROM OPERATIONS[3]			LIFE INSURANCE IN FORCE[4]		INCREASE IN LIFE INSURANCE IN FORCE[5]				EMPLOYEES[6]	
	$ THOUSANDS	MUTUAL RANK	STOCK RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK	PERCENT	RANK	NUMBER	RANK
	307,946	2		602,393,802	1	41,427,635	1	7.4	30	62,399	1
	236,179	3		519,414,564	2	36,614,861	2	7.6	29	35,900	2
	332,215	1		291,198,418	3	3,375,770	26	1.2	40	25,000	4
	223,676		3	213,119,304	4	5,238,534	22	2.5	39	25,719	3
	121,740	5		186,796,438	5	7,912,400	13	4.4	37	18,294	8
	182,154		5	17,265,985	41	1,993,630	31	13.1	18	2,780	38
	203,433	4		166,532,325	6	7,559,115	15	4.8	36	18,306	7
	238,744		2	151,256,243	9	7,111,499	17	4.9	35	N.A.	
	359,364		1	120,849,091	11	6,907,952	18	6.1	34	12,537	10
	16,873	12		137,078,662	10	16,036,149	5	13.3	17	7,895	17
	56,458	7		76,601,093	14	7,965,531	12	11.6	22	8,515	16
	64,568	6		72,195,424	15	6,414,580	19	9.8	24	9,723	12
	6,515	15		59,358,851	20	7,172,977	16	13.8	16	9,010	14
	(53,512)	24		57,472,692	22	6,054,684	20	11.8	21	9,188	13
	4,969		21	45,453,517	27	10,482,307	10	30.0	4	800	43
	47,024	8		55,626,916	24	4,866	43	9.6	25	4,128	27
	39,664	9		47,738,871	25	2,870,590	27	6.4	32	21,680	5
	105,411		7	105,964,178	12	13,157,411	6	14.2	14	18,364	6
	39,181		14	18,578,247	40	1,973,686	32	11.9	20	6,165	21
	13,522		19	3,242	49	(422)	45	—		1,220	42
	46,520		13	18,924,656	39	2,114,162	30	12.6	19	7,377	19
	(16,932)		24	22,267,006	37	4,036,719	24	22.1	7	12,477	11
	81,745		9	69,090	48	8,877	42	—		N.A.	
	7,686	14		30,696,149	30	3,743	44	13.9	15	2,830	37
	21,665		18	39,135,289	28	9,620,881	11	32.6	2	18,294	9
	36,587		16	46,446,561	26	(15,806,420)	49	—		5,286	22
	124,387		6	157,006,399	8	27,063,767	3	20.8	9	3,046	33
	36,663		15	106,566	47	(400,817)	48	—		1,640	40
	(137,934)		25	56,818,818	23	11,876,258	8	26.4	5	N.A.	
	6,265	16		65,462,000	19	3,779,910	25	—		3,566	32
	(9,717)		23	395,658	45	(104,146)	47	—		1,226	41
	12,836		20	N.A.		N.A.		—		74	46
	50,447		11	58,603,595	21	7,769,267	14	15.3	12	2,945	35
	(5,238)		22	164,501,845	7	27,357	40	20.0	10	4,991	23
	(12,125)	22		4,225,015	42	15,622	41	0.4	41	3,956	28
	3,438	18		35,559,130	29	5,222,270	23	17.2	11	4,497	25
	19,499	11		23,965,365	32	995,744	36	4.3	38	2,763	39
	47,181		12	67,651,097	17	12,599,704	7	22.9	6	2,952	34
	8,590	13		84,645,379	13	23,710,686	4	38.9	1	3,878	29
	(9,681)	21		65,782,964	18	11,681,741	9	21.6	8	4,930	24
	6,135	17		70,129,657	16	5,609,320	21	8.7	27	3,812	30
	3,019	20		2,474,175	43	210,265	39	9.3	26	677	44
	93,863		8	23,416,533	33	1,751,570	33	8.1	28	4,219	26
	22,367		17	1,001,060	44	235,079	38	30.7	3	200	45
	(37,297)	23		22,953,428	34	2,523,796	29	15.1	13	3,630	31
	24,309	10		27,034,276	31	2,678,377	28	11.0	23.	6,195	20
	199,494		4	22,453,861	36	1,346,9[illegible]7	35	6.4	33	8,534	15
	67,522		10	22,885,374	35	1,423,650	34	6.6	31	7,599	18
	(440,673)		26	134,775	46	(13,587)	46	—		65	47
	3,287	19		21,762,968	38	984,750	37	—		2,874	36
	2,800,032			4,101,406,552		311,239,257				422,156	

[9] Wholly owned by CIGNA (No. 6 on Diversified Financial list).
[10] Name changed from Bankers Life July 1, 1986.
[11] Wholly owned by American Express (No. 2 on Diversified Financial list).
[12] Wholly owned by Loews (No. 13 on Diversified Financial list).
[13] Wholly owned by Lincoln National (No. 15 on Diversified Financial list).
[14] Wholly owned by Transamerica (No. 16 on Diversified Financial list).
[15] Name changed from Union Mutual Life November 17, 1986.
[16] Wholly owned by Sears Roebuck (No. 1 on Retailing list).
[17] Wholly owned by American Brands (No. 68 on the FORTUNE 500 Industrials).
[18] Wholly owned by Kemper (No. 21 on Diversified Financial list).
[19] Company is both stock (64% of assets) and mutual (36%).

THE 50 LARGEST RETAILING COMPANIES

RANKED BY SALES

RANK		COMPANY	SALES[1]	ASSETS		NET INCOME		STOCKHOLDERS' EQUITY	
1986	1985		$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK
1	1	**Sears Roebuck** (Chicago)[2]	44,281,500	65,994,600	1	1,351,300	1	13,046,600	1
2	2	**K mart** (Troy, Mich.)	24,246,000¶	10,578,000	3	582,000	2	3,939,000	3
3	3	**Safeway Stores** (Oakland, Calif.)[2,3]	20,311,480	7,443,877	4	(14,260)	45	2,902	49
4	4	**Kroger** (Cincinnati)[2]	18,386,408	4,076,447	11	51,493	35	1,154,771	14
5	6	**J.C. Penney** (New York)	14,740,000	11,188,000	2	478,000‡	4	4,340,000	2
6	5	**American Stores** (Salt Lake City)	14,021,484	3,590,174	14	144,528	17	1,094,521	15
7	12	**Wal-Mart Stores** (Bentonville, Ark.)	11,909,076	4,049,092	12	450,086	5	1,690,493	8
8	7	**Southland** (Dallas)[2]	11,081,835¶	3,421,088	15	200,445	13	1,667,831	9
9	8	**Federated Department Stores** (Cincinnati)	10,512,425	5,687,738	7	287,600	8	2,662,554	4
10	19	**May Department Stores** (St. Louis)	10,376,000	6,209,000	5	381,000	6	2,595,000	5
11	10	**Dayton Hudson** (Minneapolis)	9,773,800	5,282,000	8	310,000‡	7	2,179,500	7
12	9	**Lucky Stores** (Dublin, Calif.)	8,775,871¶	1,551,671	23	225,940	11	272,089	42
13	13	**Winn-Dixie Stores** (Jacksonville, Fla.)[5]	8,225,244	1,355,354	27	116,391	18	704,558	20
14	16	**Great Atlantic & Pacific Tea** (Montvale, N.J.)[6]	6,615,422	1,663,760	21	88,290**	24	668,688	21
15	14	**F.W. Woolworth** (New York)	6,501,000	2,850,000	16	214,000	12	1,484,000	10
16	18	**Supermarkets General** (Woodbridge, N.J.)	5,560,130	1,173,053	33	60,865	30	465,791	29
17	20	**Albertson's** (Boise, Idaho)	5,379,643	1,264,656	29	100,152	22	594,379	23
18	27	**Zayre** (Framingham, Mass.)	5,350,638	1,879,122	20	88,974	23	652,314	22
19	25	**Marriott** (Bethesda, Md.)[2]	5,266,500	4,579,300	10	191,700	15	991,000	16
20	21	**Melville** (Harrison, N.Y.)[2]	5,262,364	1,998,782	19	238,332	9	1,263,004	13
21	26	**Allied Stores** (New York)[2,3]	5,025,000	3,124,683	9	(58,000)	49	292,386	39
22	17	**Montgomery Ward** (Chicago)[2,7]	4,383,000	3,827,000	13	110,000	20	1,456,000	11
23	29	**McDonald's** (Oak Brook, Ill.)[2]	4,143,508	5,968,507	6	479,725	3	2,506,457	6
24	28	**Carter Hawley Hale Stores** (Los Angeles)	4,089,794	2,161,876	17	4,214‡	44	324,207	37
25	30	**Stop & Shop Cos.** (Boston)	4,033,843	1,154,519	34	38,400	39	431,028	31
26	31	**Publix Super Markets** (Lakeland, Fla.)[2]	3,760,453	864,532	39	84,308	25	559,503	24
27	32	**Walgreen** (Deerfield, Ill.)[8]	3,660,553	1,197,082	32	103,137	21	553,611	26
28	38	**The Limited** (Columbus, Ohio)	3,142,696	1,377,089	26	227,780	10	781,542	18
29	34	**Tandy** (Fort Worth)[5]	3,035,969	2,076,105	18	197,659	14	1,306,458	12
30	37	**Revco D.S.** (Twinsburg, Ohio)[9]	2,743,178	987,000	35	56,900	33	392,530	34
31	36	**Service Merchandise** (Nashville)[2]	2,740,761	1,525,052	24	(46,898)	48	278,566	41
32	35	**Cavenham (U.S.A.)** (Darien, Conn.)[10,11]	2,614,226	636,749	44	19,680**	42	127,762	47
33	●	**Price** (San Diego)[9,12]	2,590,319	492,867	47	58,900	31	301,701	38
34	44	**Toys "R" Us** (Rochelle Park, N.J.)	2,444,903	1,522,966	25	152,217	16	901,041	17
35	47	**Food Lion** (Salisbury, N.C.)[2]	2,406,582	604,887	46	61,823	29	264,864	44
36	43	**Lowe's Companies** (North Wilkesboro, N.C.)	2,283,480	969,219	36	52,219	34	540,534	27
37	42	**Giant Food** (Landover, Md.)[6]	2,247,218	623,082	45	57,003	32	271,319	43
38	39	**Best Products** (Richmond)	2,200,517	1,265,637	28	(25,593)‡	47	387,158	35
39	49	**Circle K** (Phoenix)[13]	2,111,267	852,751	40	39,766	37	198,426	45
40	46	**Mercantile Stores** (Wilmington, Del.)	2,028,202	1,262,420	30	111,065	19	767,728	19
41	45	**United States Shoe** (Cincinnati)	2,003,246	922,948	37	25,472	41	488,818	28
42	40	**Rapid-American** (New York)	1,893,500	1,654,198	22	(20,471)	46	81,700	48
43	●	**Ames Department Stores** (Rocky Hill, Conn.)	1,888,471	745,432	42	27,129	40	394,205	33
44	50	**Dillard Department Stores** (Little Rock, Ark.)	1,851,423	1,213,355	31	74,458	26	556,617	25
45	48	**Waldbaum** (Central Islip, N.Y.)[2,3]	1,800,000	400,000	49	12,500	43	155,000	46
46	●	**Longs Drug Stores** (Walnut Creek, Calif.)	1,635,442	442,437	48	38,594	38	290,444	40
47	●	**Nordstrom** (Seattle)	1,629,918	891,951	38	72,939	27	451,196	30
48	●	**Rite Aid** (Shiremanstown, Pa.)[11]	1,591,146	792,167	41	62,547	28	397,993	32
49	●	**Payless Cashways** (Kansas City, Mo.)[14]	1,525,648	709,442	43	42,352	36	369,818	36
50	●	**First National Supermarkets** (Maple Heights, Ohio)[11]	1,495,000	298,000	50	N.A.	0	N.A.	0
		TOTALS	325,576,083	188,401,667		7,606,641		57,297,607	

● Not on last year's list.
¶ Includes sales from discontinued operations of at least 10%.
** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.
‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.
§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[1] Net sales include operating revenues from non-retail activities and revenues from discontinued operations when they are published. All figures are for the fiscal year ended January 31, 1987, unless otherwise noted. Sales of subsidiaries are included when they are consolidated. All companies on the list must have derived more than 50% of their revenues from retail operations.

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		SALES		STOCKHOLDERS' EQUITY					1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
485,500†	1	3.1	16	10.4	36	3.62	3.53	2.18	5.18	36	6.08	28	7.23	36
320,000	2	2.4	24	14.8	20	2.90	1.15	1.43	7.30	32	27.93	15	4.42	39
172,412	6	—		—		N.A.	N.A.	N.A.	—		—		—	
173,900	5	0.3	43	4.5	43	0.55	2.04	0.89	(4.75)	38	29.45	13	24.22	16
176,000	4	3.2	14	11.0	34	6.37‡	5.31	3.57	5.96	34	34.80	9	8.49	35
129,000	11	1.0	39	13.2	29	3.79	4.11	0.73[4]	17.96	10	(14.88)	39	20.25	21
141,000	9	3.8	10	26.6	3	1.59	1.16	0.07	35.83	2	46.47	7	48.38	2
67,200	16	1.8	32	12.0	32	3.96	4.41	1.28	11.96	24	9.27	27	14.75	29
133,000	10	2.7	19	10.8	35	2.97	2.94	1.75	5.43	35	29.14	14	10.44	32
151,700	8	3.7	11	14.5§	21	2.44	2.49	1.02	9.11	28	16.75	21	18.31	26
126,000	12	3.2	15	14.2	25	3.19‡	2.92	1.03	12.00	23	(5.70)	35	19.69	22
44,000	25	2.6	20	82.7§	1	4.47	1.67	1.15	14.54	19	10.81	24	13.00	31
76,900	15	1.4	35	16.5	14	2.84	2.64	1.35	7.68	31	24.08	17	14.21	30
60,000	19	1.3	36	13.2	30	2.33**	5.74**	0.17**	29.92	3	9.32	26	5.65	38
120,500	13	3.3	13	14.4	24	3.25	2.75	1.80	6.06	33	31.75	12	18.63	24
53,000	21	1.1	38	13.1	31	1.60	1.78	0.34	16.84	16	(7.06)	38	31.96	9
40,000	27	1.9	31	16.9	13	3.00	2.57	0.60	17.41	13	35.04	8	25.74	15
63,500	17	1.7	33	13.6	26	1.49	1.61	0.31	16.85	15	(21.36)	40	37.32	4
194,600	3	3.6	12	19.3	7	1.40	1.24	0.18	23.07	4	33.62	10	27.67	14
80,394	14	4.5	6	18.9§	9	4.40	3.90	1.23	13.59	21	9.72	25	19.52	23
61,800†	18	—		—		N.A.	N.A.	N.A.	—		—		—	
56,300	20	2.5	23	7.6	40	N.A.	N.A.	N.A.	—		—		—	
159,000†	7	11.6	1	19.1	8	3.73	3.33	0.81	16.56	17	14.03	23	15.85	28
46,000	22	0.1	44	—		(1.27)‡	0.92	1.97	—		73.25	3	16.21	27
46,000	23	1.0	40	8.9	38	2.77	2.20	1.15	9.17	27	33.17	11	29.54	13
44,813	24	2.2	28	15.1	19	1.72	1.47	N.A.	—		—		—	
40,000	28	2.8	17	18.6	10	1.67	1.53	0.28	19.61	7	16.95	20	35.42	7
34,900	31	7.3	2	29.1	2	1.21	0.80	0.03	43.46	1	53.23	6	48.73	1
36,000	29	6.5	3	15.1	18	2.22	2.11	0.47	16.89	14	4.29	29	23.26	18
26,000	33	2.1	29	14.5	22	1.72	1.06	0.66	10.02	25	—		—	
25,200†	34	—		—		(1.41)	0.32	0.50	—		(36.92)	41	7.03	37
21,000	37	0.8	41	15.4	17	N.A.	N.A.	N.A.	—		—		—	
7,300	50	2.3	27	19.5	6	1.25	1.01	N.A.	—		(6.43)	36	—	
28,600	32	6.2	4	16.9	12	1.17	0.93	N.A.	—		22.78	18	—	
20,871	38	2.6	21	23.3	4	0.39	0.30	0.07	19.39	8	69.47	4	37.15	5
14,783	46	2.3	26	9.7	37	1.34	1.64	0.53	9.68	26	1.78	30	10.25	33
19,300	41	2.5	22	21.0	5	1.90	1.52	0.38	17.60	12	(3.74)	34	34.74	8
20,500	39	—		—		(0.95)‡	0.08	0.76	—		(37.48)	42	(0.15)	40
19,342	40	1.9	30	18.0§	11	1.73	1.62	0.24	21.95	5	59.29	5	30.80	10
22,000†	36	5.5	5	14.5	23	7.54	6.95	1.98	14.31	20	24.39	16	21.13	20
35,000	30	1.3	37	5.2	42	0.57	1.46	0.61	(0.73)	37	(0.83)	32	22.18	19
40,100	26	—		—		N.A.	N.A.	N.A.	—		—		—	
25,000†	35	1.4	34	6.9	41	0.73	1.19	0.21	13.13	22	(6.47)	37	40.52	3
18,412†	42	4.0	8	13.4	27	2.35	2.29	0.35	21.02	6	1.30	31	36.39	6
11,000	49	0.7	42	8.1	39	2.10	2.99	0.98	7.87	30	83.30	1	30.16	11
12,000	48	2.4	25	13.3	28	1.78	1.74	0.81	8.19	29	(1.48)	33	8.55	34
17,800†	43	4.5	7	16.2	15	1.82	1.30	0.24	18.09	9	76.11	2	29.95	12
17,080	44	3.9	9	15.7	16	1.52	1.69	0.29	17.82	11	16.41	22	23.76	17
13,685	47	2.8	18	11.5	33	1.22	1.12	0.31	14.78	18	22.44	19	18.59	25
15,000	45	—		—		N.A.	N.A.	N.A.	—		—		—	
3,763,392														

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[2] Figures are for fiscal year ended December 31, 1986.
[3] Figures are FORTUNE estimates.
[4] Figure is for Skaggs.
[5] Figures are for fiscal year ended June 30, 1986.
[6] Figures are for fiscal year ended February 28, 1986.
[7] Wholly owned by Mobil (No. 5 on the FORTUNE 500 Industrials).
[8] Figures are for fiscal year ended August 31, 1986.
[9] Figures are for fiscal year ended May 31, 1986.
[10] Holding company of Grand Union.
[11] Figures are for fiscal year ended March 31, 1986.
[12] Company was No. 39 among last year's Largest Diversified Service Companies.
[13] Figures are for fiscal year ended April 30, 1986.
[14] Figures are for fiscal year ended November 30, 1986.

THE 50 LARGEST TRANSPORTATION COMPANIES

RANKED BY OPERATING REVENUES

RANK 1986	RANK 1985	COMPANY	OPERATING REVENUES[1] $ THOUSANDS	ASSETS $ THOUSANDS	ASSETS RANK	NET INCOME[2] $ THOUSANDS	NET INCOME RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	STOCKHOLDERS' EQUITY RANK
1	5	**UAL** (Elk Grove, Ill.)	9,196,233	8,716,517	6	11,600	26	2,292,610	8
2	2	**United Parcel Service of America** (Greenwich, Conn.)	8,619,703	4,801,133	9	668,966	1	2,469,798	7
3	1	**Burlington Northern** (Seattle)	6,941,413	10,650,956	4	(860,485)	50	3,534,314	4
4	●	**Union Pacific** (New York)[3]	6,688,000	10,863,000	3	(460,000)	48	3,408,000	5
5	3	**CSX** (Richmond)	6,345,000	12,661,000	1	418,000	3	4,873,000	3
6	6	**AMR** (Fort Worth)	6,018,175	7,527,969	8	279,132	4	2,484,896	6
7	4	**Santa Fe Southern Pacific** (Chicago)	5,801,600	11,601,800	2	(137,900)	45	5,040,300	2
8	8	**Delta Air Lines** (Atlanta)[6]	4,460,062	3,785,462	11	47,286	16	1,301,946	9
9	14	**Texas Air** (Houston)	4,406,897	8,194,611	7	72,703**	11	803,869	13
10	9	**Norfolk Southern** (Norfolk, Va.)	4,076,407	9,752,445	5	518,688	2	5,070,751	1
11	12	**NWA** (Eagan, Pa.)	3,589,174	4,322,854	10	76,941	9	1,105,916	10
12	10	**Trans World Airlines** (New York)	3,145,429	3,369,869	12	(106,328)	44	241,362	28
13	11	**Pan Am** (New York)	3,038,995	2,107,539	15	(462,814)	49	8,763	48
14	13	**Federal Express** (Memphis)[8]	2,606,210	2,276,362	13	131,839	5	1,091,714	11
15	15	**Consolidated Freightways** (Palo Alto, Calif.)	2,124,467	1,275,440	20	89,109	8	655,048	16
16	21	**Piedmont Aviation** (Winston-Salem, N.C.)	1,865,473	1,717,650	16	72,363	12	783,888	14
17	16	**USAir Group** (Arlington, Va.)	1,835,199	2,147,081	14	98,352	6	1,057,953	12
18	20	**Yellow Freight System** (Overland Park, Kans.)	1,731,731	862,359	30	69,719	13	376,370	22
19	19	**Roadway Services** (Akron)	1,717,491	1,070,659	25	76,466	10	654,235	17
20	22	**Leaseway Transportation** (Beachwood, Ohio)	1,484,669¶	916,394	28	50,791	14	269,890	26
21	26	**American President Cos.** (Oakland)	1,466,714	1,343,304	19	17,956	22	640,562	18
22	27	**Tiger International** (Los Angeles)	1,110,948	883,457	29	(45,063)	42	(43,160)	50
23	32	**CNW** (Chicago)	959,490	1,691	50	43,040	17	397,275	21
24	25	**McLean Industries** (New York)[9]	896,995	1,569,384	17	(248,773)	47	23,945	46
25	35	**PS Group** (San Diego)[10]	895,423	1,114,006	22	(13,930)	39	212,282	29
26	33	**Emery Air Freight** (Wilton, Conn.)	887,523	449,305	33	(5,440)	37	170,797	31
27	34	**Purolator Courier** (Basking Ridge, N.J.)	841,434	389,773	36	(57,643)	43	121,031	32
28	36	**Southwest Airlines** (Dallas)	768,790	1,078,190	24	50,035	15	511,850	20
29	28	**Illinois Central Gulf Railroad** (Chicago)[11]	715,462	1,546,344	18	(171,674)	46	339,265	24
30	38	**Mayflower Group** (Carmel, Ind.)	705,796	441,517	34	3,527	31	29,331	45
31	40	**Arkansas Best** (Fort Smith, Ark.)	689,815	359,960	38	18,205	21	110,328	34
32	39	**Soo Line** (Minneapolis)	631,823	1,098,663	23	(43,315)	41	261,716	27
33	43	**Carolina Freight** (Cherryville, N.C.)	591,324	310,486	39	16,644	24	120,588	33
34	41	**United Van Lines** (Fenton, Mo.)	589,871	146,839	46	3,464	32	32,091	44
35	42	**Allied Van Lines** (Broadview, Ill.)	562,808	104,874	48	3,656	30	36,722	43
36	48	**Airborne Freight** (Seattle)	541,627	271,562	41	13,215	25	91,751	36
37	44	**Alexander & Baldwin** (Honolulu)	536,668	934,032	27	92,380	7	559,659	19
38	46	**Kansas City Southern Industries** (Mo.)	481,507	1,006,081	26	(42,242)	40	354,800	23
39	49	**Alaska Air Group** (Seattle)	468,264	671,889	31	17,713	23	177,179	30
40	●	**Preston** (Preston, Md.)	418,943	300,675	40	7,263	28	106,195	35
41	●	**American Carriers** (Overland Park, Kans.)	401,917	174,175	43	5,553	29	83,558	37
42	50	**Grand Trunk** (Detroit)	382,498	538,562	32	(11,841)	38	295,946	25
43	●	**ACI Holdings** (Newport Beach, Calif.)	375,412	211,882	42	(1,621)	36	78,672	38
44	●	**Transcon** (El Segundo, Calif.)	343,393	152,774	44	2,281	35	63,099	39
45	●	**America West Airlines** (Tempe, Ariz.)	328,926	385,406	37	3,027**	34	57,933	40
46	●	**Overseas Shipholding Group** (New York)	294,989	1,240,186	21	37,347	18	661,500	15
47	●	**Midway Airlines** (Chicago)	261,365	150,269	45	9,031**	27	55,614	41
48	●	**Braniff** (Dallas)[12,13]	244,311	88,408	49	23,048**	20	54,241	42
49	●	**Missouri-Kansas-Texas Railroad** (Dallas)[14]	236,021	408,812	35	25,001**	19	(7,928)	49
50	●	**HAL** (Honolulu)	225,010	138,760	47	3,433	33	22,112	47
		TOTALS	103,517,395	126,132,366		408,705		43,143,577	

● Not on last year's list.
¶ Includes sales from discontinued operations of at least 10%.
** Reflects an extraordinary credit of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.

† Average for the year; see the reference to "employees" on page 222.
§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[1] Consolidated operating revenues include those from non-transportation activities and sales from discontinued operations when these are published. All figures are for the year ended December 31, 1986, unless otherwise noted. All companies must derive more than 50% of their operating revenues from carrier operations and file public financial statements.

[2] Net income for all railroads has been calculated according to generally accepted accounting principles.

[3] Company was No. 4 among last year's 100 Largest Diversified Service Companies.

THE SERVICE 500

EMPLOYEES		NET INCOME AS PERCENT OF				EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
		SALES		STOCKHOLDERS' EQUITY					1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
NUMBER	RANK	PERCENT	RANK	PERCENT	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
87,000†	2	0.1	35	0.5	34	0.25	(2.09)	0.75	(10.40)	25	6.95	26	8.59	27
168,200†	1	7.8	6	27.1	2	3.96	3.36	N.A.	—		—		—	
44,200†	7	—		—		(12.07)	8.03	1.42	—		(20.09)	37	20.47	12
32,700	12	—		—		(4.56)	4.18	2.09	—		19.34	21	13.32	20
48,000	6	6.6	7	8.3§	25	2.73	(0.78)	1.44[4]	6.59	13	(0.12)	32	19.76	14
54,300	4	4.6	11	11.0§	15	4.63	5.94	1.97	8.92	9	29.61	15	15.55	18
53,423	5	—		—		(0.84)	2.67	1.27[5]	—		(12.52)	36	15.67	17
38,901	8	1.1	29	3.6	30	1.18	6.50	1.76	(3.95)	23	26.22	17	12.19	21
68,000†	3	1.7	25	9.0	24	1.75**	5.03**	0.66**	10.24	7	125.00	2	28.47	7
38,297†	9	12.7	2	10.2	18	2.74	2.65	1.40[7]	6.92	12	8.16	25	16.87	16
33,427	11	2.1	23	7.0	26	3.26	3.18	2.39	3.15	19	34.90	14	10.03	25
27,442†	13	—		—		(3.87)	(6.10)	N.A.	—		43.08	9	—	
21,500	17	—		—		(3.42)	0.45	2.24**	—		(45.16)	41	(1.61)	33
33,988†	10	5.1	10	12.1	12	2.64	1.61	N.A.	—		10.75	23	—	
24,600	14	4.2	14	13.6	10	2.31	3.10	1.56	4.00	17	16.29	22	17.62	15
20,798	18	3.9	16	9.2	23	3.48	3.89	1.22	11.03	6	35.82	13	31.62	3
14,976	21	5.4	9	9.3	22	3.34	4.05	2.19**	4.31	16	5.81	27	22.54	9
23,500†	16	4.0	15	18.5	4	2.44	1.95	1.19	7.44	10	29.34	16	9.13	26
23,500	15	4.5	13	11.7	14	1.91	1.90	1.05	6.17	15	2.44	30	7.32	29
20,000	19	3.4	19	18.8	3	2.55	5.29	2.31	0.98	20	48.46	8	14.65	19
3,970	38	1.2	28	2.8	32	0.71	1.86	2.61	(12.22)	26	41.60	11	—	
6,200	27	—		—		(1.45)	(2.69)	1.61	—		9.52	24	(1.65)	34
9,500†	24	4.5	12	10.8	16	2.31	(1.71)**	0.62	14.06	5	(6.74)	33	30.04	4
N.A.		—		—		N.A.	(1.89)	N.A.	—		(85.71)	42	—	
5,590	32	—		—		(2.25)	3.88	0.86	—		41.42	12	21.42	11
7,100	26	—		—		(0.28)	0.85	1.00	—		(30.78)	40	(0.45)	31
19,500	20	—		—		(7.54)	(3.86)	1.77	—		20.53	20	7.81	28
5,819	31	6.5	8	9.8	21	1.55	1.54	0.37	15.33	3	(22.82)	38	29.54	5
5,870	30	—		—		N.A.	N.A.	N.A.	—		—		—	
2,200	44	0.5	34	12.0	13	N.A.	N.A.	N.A.	—		—		—	
10,492	22	2.6	21	16.5	6	1.79	1.65**	0.89	7.22	11	86.49	5	24.22	8
6,022	29	—		—		(4.56)	(1.14)	2.13	—		(23.87)	39	11.38	23
9,525	23	2.8	20	13.8	9	2.53	2.26	0.25	26.04	1	23.23	19	32.33	1
982	49	0.6	33	10.8	17	N.A.	N.A.	N.A.	—		—		—	
1,050	48	0.7	32	10.0	20	3.51	4.56	1.33	10.19	8	—		—	
6,078	28	2.4	22	14.4	8	2.23	1.39	1.22	6.22	14	59.34	7	12.11	22
3,250	41	17.2	1	16.5	5	3.30	3.00	0.62	18.20	2	63.33	6	32.16	2
4,750	34	—		—		(4.33)	4.92	0.68	—		(0.09)	31	29.13	6
3,471†	40	3.8	17	10.0	19	2.19	2.10	1.54**	3.56	18	25.14	18	22.21	10
7,933	25	1.7	24	6.8	27	1.26	0.75	1.61	(2.44)	22	41.96	10	6.62	30
4,764	33	1.4	27	6.7	28	1.04	0.53	N.A.	—		(10.71)	35	—	
4,579†	35	—		—		N.A.	N.A.	N.A.	—		—		—	
3,575	39	—		—		1.61	0.70	N.A.	—		93.33	3	—	
4,120†	36	0.7	31	3.6	31	0.54	0.51	1.56	(10.07)	24	3.17	29	(1.08)	32
3,978	37	0.9	30	2.0§	33	0.11**	1.01**	N.A.	—		(9.30)	34	—	
2,130†	45	12.7	3	5.7	29	1.45	1.20	1.44	0.08	21	4.27	28	10.15	24
1,949†	46	3.5	18	12.5§	11	0.87	(0.50)	N.A.	—		90.91	4	—	
1,500	47	9.4	5	42.5	1	1.87**	(7.21)	N.A.	—		—		—	
2,317	43	10.6	4	—		12.81**	0.72	N.A.	—		—		—	
2,343	42	1.5	26	15.5	7	1.83	(0.10)	0.49	14.08	4	141.67	1	19.81	13
1,027,309														

TRANSPORTATION

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[4] Figure is for Seaboard Coast Lines.
[5] Figure is for Santa Fe Industries.
[6] Figures are for fiscal year ended June 30, 1986.
[7] Figure is for Norfolk & Western Railway.
[8] Figures are for fiscal year ended May 31, 1986.
[9] All figures are FORTUNE estimates.
[10] Name changed from PSA November 18, 1986.
[11] Wholly owned by IC Industries (No. 85 on the FORTUNE 500 Industrials).
[12] Figures are for fical year ended January 31, 1986.
[13] Figures are for fiscal year ended January 31, 1986.
[14] Wholly owned by Katy Industries (No. 499 on the FORTUNE 500 Industrials).

THE 50 LARGEST UTILITIES

RANKED BY ASSETS

RANK 1986	RANK 1985	COMPANY	ASSETS[1] $ THOUSANDS	OPERATING REVENUES[2] $ THOUSANDS	RANK	NET INCOME $ THOUSANDS	RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	RANK
1	1	**GTE** (Stamford, Conn.)	27,401,801	15,111,528	1	1,184,312	3	7,885,274	5
2	2	**BellSouth** (Atlanta)	26,218,100	11,444,100	2	1,588,700	1	11,261,900	1
3	3	**NYNEX** (New York)	21,804,600	11,341,500	3	1,215,300	2	8,868,400	2
4	4	**Bell Atlantic** (Philadelphia)	21,090,900	9,920,800	4	1,167,100	4	8,320,700	3
5	7	**Pacific Gas & Electric** (San Francisco)	21,002,253	7,816,661	10	1,081,223	6	8,223,593	4
6	5	**Pacific Telesis Group** (San Francisco)	20,320,500	8,977,300	6	1,079,400	7	7,753,300	7
7	6	**Southwestern Bell** (St. Louis)	20,299,800	7,902,400	9	1,022,700	9	7,818,000	6
8	9	**U S West** (Englewood, Colo.)	18,747,400	8,308,400	7	924,300	10	7,278,500	9
9	8	**American Information Technologies** (Chicago)	18,739,400	9,362,100	5	1,138,400	5	7,609,000	8
10	10	**Southern** (Atlanta)	18,141,116	6,846,591	11	882,860	11	6,009,574	11
11	11	**Commonwealth Edison** (Chicago)	17,405,228	5,478,511	12	1,049,595	8	6,855,742	10
12	12	**Middle South Utilities** (New Orleans)	14,358,531	3,485,912	24	451,302	19	4,354,426	15
13	13	**American Electric Power** (Columbus, Ohio)	13,591,608	4,842,801	16	507,171	16	4,007,922	18
14	14	**Southern California Edison** (Rosemead)	13,244,952	5,311,733	14	768,617	12	5,159,929	12
15	15	**Texas Utilities** (Dallas)	12,318,192	3,932,045	20	626,851	13	4,460,821	14
16	17	**Philadelphia Electric**	10,748,020	3,090,869	28	566,320	14	4,066,353	17
17	16	**Public Service Enterprise Group** (Newark, N.J.)[3]	10,557,822	4,498,416	17	378,463	26	4,181,492	16
18	18	**Detroit Edison**	9,997,986	2,869,284	32	477,095	17	3,246,093	21
19	37	**Centerior Energy** (Cleveland)[4]	9,967,571	1,917,730	41	391,893	23	2,991,341	23
20	20	**FPL Group** (North Palm Beach, Fla.)	9,511,299	4,091,504	19	365,411	27	2,988,939	24
21	19	**Consolidated Edison of New York**	9,111,181	5,197,736	15	546,407	15	4,633,455	13
22	21	**Houston Industries**	9,027,817	3,535,968	23	424,935	20	3,102,627	22
23	23	**Dominion Resources** (Richmond)	8,940,000	3,071,600	30	379,800	25	2,813,100	26
24	25	**Long Island Lighting** (Hicksville, N.Y.)	8,843,609	1,977,121	40	316,675	30	3,493,016	20
25	22	**Consumers Power** (Jackson, Mich.)	8,630,743	3,108,414	27	177,844	44	2,548,284	29
26	●	**Enron** (Houston)[6]	8,489,632	8,080,655	8	57,663	47	1,208,652	49
27	24	**Duke Power** (Charlotte, N.C.)	8,226,729	3,400,933	25	467,834	18	3,540,407	19
28	26	**Ohio Edison** (Akron)	7,902,704	1,741,900	45	410,828	21	2,955,374	25
29	27	**Niagara Mohawk Power** (Syracuse, N.Y.)	7,611,203	2,660,319	34	397,865	22	2,571,491	28
30	30	**Carolina Power & Light** (Raleigh, N.C.)	7,207,102	2,040,798	38	357,774	28	2,591,863	27
31	28	**Pennsylvania Power & Light** (Allentown)	7,139,072	2,188,925	36	300,108	32	2,147,024	32
32	29	**Central & South West** (Dallas)	7,133,236	2,555,102	35	389,282	24	2,359,742	30
33	33	**Northeast Utilities** (Berlin, Conn.)	6,480,451	2,032,117	39	300,894	31	1,884,145	36
34	36	**United Telecommunications** (Westwood, Kans.)	6,379,107	3,058,783	31	180,561	43	1,727,829	40
35	31	**Union Electric** (St. Louis)	6,323,482	1,807,182	43	343,893	29	2,348,815	31
36	40	**AZP Group** (Phoenix)	6,168,857	1,249,912	49	234,184	37	2,069,347	33
37	38	**Gulf States Utilities** (Beaumont, Tex.)	6,116,855	1,478,388	47	244,981	36	2,048,672	34
38	32	**General Public Utilities** (Parsippany, N.J.)	6,085,670	2,787,077	33	205,247	41	1,786,139	39
39	34	**Columbia Gas System** (Wilmington, Del.)	5,590,161	3,369,578	26	86,847‡	45	1,498,644	45
40	41	**PacifiCorp** (Portland, Ore.)	5,521,200	2,066,900	37	250,900	35	1,835,400	37
41	44	**Illinois Power** (Decatur)	5,431,766	1,183,865	50	292,721	33	2,007,049	35
42	42	**Contel** (Atlanta)[7]	5,384,821	3,073,977	29	232,878	38	1,496,379	46
43	45	**MCI Communications** (Washington, D.C.)	5,258,000	3,592,000	22	(448,000)	50	1,262,000	47
44	39	**Texas Eastern** (Houston)	5,249,175	4,143,206	18	1,267	48	1,241,988	48
45	49	**Pacific Lighting** (Los Angeles)	5,020,041	5,323,757	13	83,605	46	1,657,440	41
46	48	**Baltimore Gas & Electric**	4,370,500	1,834,020	42	274,619	34	1,799,052	38
47	47	**Transco Energy** (Houston)	4,257,436	3,690,767	21	(4,307)	49	774,651	50
48	●	**Northern States Power** (Minneapolis)	4,246,963	1,781,630	44	206,882	40	1,536,225	44
49	●	**New York State Electric & Gas** (Binghamton)	4,224,984	1,277,284	48	228,494	39	1,558,462	43
50	50	**Allegheny Power System** (New York)	4,199,901	1,704,093	46	203,746	42	1,605,549	42
		TOTALS	530,039,477	221,564,192		24,013,440		187,444,120	

● Not on last year's list.
‡ Reflects an extraordinary charge of at least 10%; see the explanations of "net income" and "earnings per share" on page 222.
§ Dividends paid on mandatory redeemable preferred stock subtracted from net income.

[1] Assets are shown as of December 31, 1986, unless otherwise noted. Only assets of consolidated subsidiaries are included.

[2] Gross receipts from operations during the 1986 fiscal year, including any non-utility revenues from manufacturing, transportation, etc., and revenues from discontinued operations when they are published. All companies on the list must have derived more than 50% of their revenues from utility operations.

[3] Formed as holding company for Public Service Electric & Gas July 25, 1986.

[4] Formed by merger of Cleveland Electric Illuminating (1985 rank: 37) and Toledo Edison.

[5] Figure is for Cleveland Electric Illuminating.

EMPLOYEES		NET INCOME AS PERCENT OF EQUITY		EARNINGS PER SHARE					TOTAL RETURN TO INVESTORS			
							1976-86 GROWTH RATE		1986		1976-86 AVERAGE	
PERCENT	RANK	NUMBER	RANK	1986/$	1985/$	1976/$	PERCENT	RANK	PERCENT	RANK	PERCENT	RANK
160,000	1	14.9§	5	3.44	(0.63)	2.19	4.60	16	34.89	18	15.10	24
96,886	2	14.1	14	3.38	3.13	N.A.	—		24.44	31	—	
90,200	3	13.7	19	6.01	5.42	N.A.	—		40.80	7	—	
80,185	4	14.0	16	5.85	5.47	N.A.	—		35.76	14	—	
29,200	10	12.8§	30	2.60	2.65	1.45	6.01	11	31.65	23	19.30	7
74,937	6	13.9	24	5.02	4.54	N.A.	—		33.61	19	—	
67,490	8	13.1	28	10.26	10.00	N.A.	—		40.06	8	—	
69,375	7	12.7	31	4.86	4.84	N.A.	—		28.68	26	—	
77,538	5	15.0	6	7.87	7.35	N.A.	—		31.57	24	—	
31,700	9	14.7	12	3.17	3.20	1.65	6.75	8	24.16	32	16.66	17
18,109	17	14.1§	13	4.69	4.45	3.20	3.90	22	26.84	27	12.39	35
13,640	25	10.4	39	2.21	2.01	1.82	1.96	29	23.53	34	7.97	39
23,315	12	12.7	36	2.62	2.19‡	2.66	(0.15)	34	26.45	30	12.70	33
17,553	18	14.3§	11	3.38	3.26	1.85	6.21	10	36.47	13	22.51	3
16,927	19	14.1	20	4.45	4.35	2.29	6.87	7	14.54	41	13.16	30
10,975	29	13.0§	29	2.60	2.56	1.91	3.13	27	44.30	3	16.01	19
13,723	23	8.8§	42	2.84	3.96	2.79	0.18	33	37.13	12	17.57	15
10,967	30	13.3§	25	2.58	2.33	1.66	4.51	17	14.60	40	12.98	32
9,306	36	13.1	2	3.04	3.18[5]	2.14[5]	3.55	25	9.64	43	13.15	31
14,100	20	12.2	33	2.90	3.11	1.19	9.27	1	19.43	36	18.41	11
20,698	15	11.7§	34	4.26	4.26	2.09	7.38	4	26.69	28	26.86	2
11,366	27	13.7	21	3.81	4.42	2.67	3.61	24	35.13	17	15.28	23
13,863†	22	13.5	22	4.10	3.60	2.70	4.27	20	33.37	20	18.19	12
4,900	46	9.1	35	2.13	3.97	2.52	(1.67)	36	26.56	29	2.55	43
10,618	34	5.3§	44	0.74	(4.42)	3.63	(14.70)	39	108.33	1	5.85	40
10,900	31	0.8§	47	0.21	(1.42)‡	3.15	(23.72)	40	(6.85)	45	15.71	21
20,304	16	12.6§	32	4.04	3.72	2.40	5.35	13	35.66	15	17.63	14
7,383	43	13.2§	26	2.47	2.45	2.14	1.44	31	31.23	25	12.20	36
11,400	26	13.2§	4	2.71	2.88	1.61	5.35	14	(9.71)	46	13.56	28
9,475	35	13.2§	27	3.96	3.86	2.74	3.75	23	38.34	9	15.96	20
8,339	41	11.2§	38	3.10	2.68	2.68	1.47	30	37.29	11	16.73	16
9,202	38	16.5	1	3.75	3.61	1.75	7.92	2	32.82	22	17.94	13
9,233	37	16.0	7	2.78	2.72	1.43	6.87	6	46.83	2	20.72	4
23,245	13	10.3§	40	1.81	0.18	2.01	(1.04)	35	15.16	39	11.17	37
7,377	44	13.7§	18	2.89	2.86	1.86	4.51	18	44.09	4	18.51	8
11,300	28	9.4§	43	3.04	3.88	2.47	2.10	28	14.18	42	15.40	22
4,822	47	10.2§	41	1.71	2.10	1.54	1.05	32	(39.66)	49	4.39	42
13,934	21	11.5	37	3.26	1.54	2.20	4.01	21	33.09	21	4.50	41
10,600	32	5.3§	45	1.82	(2.67)	3.70	(6.85)	38	23.87	33	13.36	29
10,621	33	13.3§	9	3.45	3.44	2.48	3.36	26	23.04	35	14.19	26
4,593	49	13.9§	17	3.98	3.48	2.41	5.14	15	35.60	16	12.51	34
23,098	14	15.5§	3	3.04	3.21	1.62	6.50	9	17.58	38	13.59	27
13,650	24	—		(1.63)	0.48‡	(0.41)	—		(44.44)	50	29.57	1
8,800	40	0.1	48	0.02	0.75	2.20	(37.50)	41	(18.57)	47	9.21	38
26,571	11	5.0	46	1.34	3.80	2.48	(5.97)	37	8.47	44	20.47	5
8,833	39	14.7§	8	3.15	2.80	1.56	7.28	5	43.82	5	20.36	6
4,798	48	—		(0.92)	0.91‡	2.21	—		(19.90)	48	14.84	25
7,515	42	13.4§	23	3.09	2.96	1.46	7.75	3	38.00	10	18.49	9
4,423	50	14.1§	15	3.86	3.46	2.28	5.41	12	18.67	37	16.23	18
5,837	45	12.3§	10	4.03	3.59	2.61	4.44	19	42.67	6	18.41	10
1,263,824												

[6] Company was No. 2 among last year's Largest Diversified Service Companies as InterNorth; name changed April 10, 1986.

[7] Name changed from Continental Telecom May 1, 1986.

WHO DID BEST AND WORST AMONG THE SERVICE 500

TOTAL RETURN TO INVESTORS, 1986

THE TEN HIGHEST

	RANK	
HAL	T-50	141.67%
Texas Air	T-9	125.00
Consumers Power	U-25	108.33
Washington Mutual Savings	I-25	104.66
ACI Holdings	T-43	93.33
Midway Airlines	T-47	90.91
Arkansas Best	T-31	86.49
Waldbaum	R-45	83.30
American S&L Ass'n	I-50	82.86
Student Loan Marketing Ass'n	F-14	79.64

THE FIVE LOWEST

McLean Industries	T-24	−85.71%
First City Bancorp. of Texas	B-39	−73.49
United Financial Group	I-20	−73.08
Allegheny Beverage	S-61	−65.12
Security Capital	F-43	−57.95

THE SERVICE 500 MEDIANS

Utilities	29.96%
Savings Institutions	18.03
Transportation	17.82
Retailing	16.58
Diversified Service	11.76
Commercial Banking	9.85
Diversified Financial	8.91
All Industries	*13.34*

Life insurance companies are not included.

TOTAL RETURN TO INVESTORS, 1976-86 AVG.

THE TEN HIGHEST

	RANK	
Subaru of America	S-37	54.59%
M.D.C. Holdings	S-94	54.36
Charter Medical	S-98	50.95
The Limited	R-28	48.73
Wal-Mart Stores	R-7	48.38
Comdisco	S-79	47.74
Ames Department Stores	R-43	40.52
Berkshire Hathaway	S-31	40.51
Waste Management	S-35	40.00
DCNY	F-34	39.82

THE FIVE LOWEST

Continental Illinois Corp.	B-14	−11.21%
First City Bancorp. of Texas	B-39	−10.42
InterFirst Corp.	B-32	−8.56
Pittston	S-57	−7.29
National Intergroup	S-10	−6.54

THE SERVICE 500 MEDIANS

Retailing	20.69%
Commercial Banking	20.00
Diversified Service	19.82
Savings Institutions	18.82
Diversified Financial	18.29
Transportation	15.61
Utilities	15.40
All Industries	*18.58*

Life insurance companies are not included.

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	RANK	
Charter	S-50	322.5%
ServiceMaster	S-62	102.1
Lucky Stores	R-12	82.7
American Financial	F-26	52.1
Finan. Corp. (Santa Barbara)	I-31	49.4
CBS	S-4	44.9
Braniff	T-48	42.5
Allegheny Beverage	S-61	39.6
Columbia S&L Ass'n	I-13	38.7
Kay	S-85	38.5

THE SERVICE 500 MEDIANS

	1986	1985
Savings Institutions	16.0%	13.7%
Diversified Financial	15.9	9.4
Retailing	14.2	14.7
Utilities	13.3	13.0
Commercial Banking	12.8	13.0
Diversified Service	12.0	13.0
Transportation	7.7	11.5
All Industries	*13.1*	*12.8*

Life insurance companies are not included.

RETURN ON SALES

THE TEN HIGHEST

	RANK	
Illinois Power	U-41	24.7%
Ohio Edison	U-28	23.6
Centerior Energy	U-19	20.4
Commonwealth Edison	U-11	19.2
Union Electric	U-35	19.0
AZP Group	U-36	18.7
Waste Management	S-35	18.4
Philadelphia Electric	U-16	18.3
N.Y. State Electric & Gas	U-49	17.9
Carolina Power & Light	U-30	17.5

THE SERVICE 500 MEDIANS

	1986	1985
Utilities	12.7%	12.2%
Retailing	2.4	2.7
Diversified Service	2.1	2.0
Transportation	1.6	3.5
All Industries	*2.8*	*3.3*

Commercial banks, diversified financial companies, savings institutions, and life insurance companies are not included.

SALES PER DOLLAR OF STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	RANK	
Pan Am	T-13	$346.80
Roundy's	S-40	44.65
McLean Industries	T-24	37.46
ServiceMaster	S-62	34.96
Turner	S-27	34.93
ARA Holding	S-13	32.77
Lucky Stores	R-12	32.25
Charter	S-50	27.99
Mayflower Group	T-30	24.06
Southern States Co-op	S-100	23.96

THE FIVE LOWEST

Ohio Edison	U-28	$0.59
Overseas Shipholding	T-46	0.45
Southland Financial	F-50	0.32
Tiger International	T-22	−25.74
Missouri-Kansas-Texas RR	T-49	−29.77

THE SERVICE 500 MEDIANS

Retailing	$6.39
Diversified Service	4.61
Transportation	3.46
Diversified Financial	2.36
Utilities	1.11
All Industries	*3.24*

Commercial banks, savings institutions, and life insurance companies are not included.

ASSETS PER EMPLOYEE

THE TEN HIGHEST

	RANK	
National Investors Life	L-49	$49,638,067
Federal Nat'l Mortgage	F-1	43,654,783
Student Loan Marketing	F-14	18,528,521
Kemper Investors Life	L-44	16,993,533
DCNY	F-34	13,751,333
Bank of Tokyo Trust	B-83	12,910,553
Executive Life	L-15	12,338,637
Columbia S&L Ass'n	I-13	12,316,448
First Boston	F-7	10,820,878
Teachers Ins. & Annuity	L-6	10,031,332

THE FIVE LOWEST

Beverly Enterprises	S-34	$19,135
TW Services	S-38	17,973
Winn-Dixie Stores	R-13	17,625
ARA Holding	S-13	14,359
CNW	T-23	174

THE SERVICE 500 MEDIANS

Savings Institutions	$3,199,080
Commercial Banking	1,605,864
Life Insurance	1,399,118
Diversified Financial	921,162
Utilities	671,105
Transportation	100,190
Diversified Service	96,938
Retailing	37,962
All Industries	*719,393*

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WHO DID BEST AND WORST AMONG THE SERVICE **500**

SALES PER EMPLOYEE

THE TEN HIGHEST	RANK	
Federal Nat'l Mortgage	F-1	$4,582,609
Bindley Western Industries	S-92	2,002,876
Subaru of America	S-37	1,978,863
Student Loan Marketing	F-14	1,399,172
General Re	F-24	1,361,578
Kay	S-85	1,116,749
Hardware Wholesalers	S-90	1,003,024
Indiana Farm Bureau	S-75	939,424
Countrymark	S-84	936,339
Comdisco	S-79	932,403
THE FIVE LOWEST		
Ogden	S-66	$27,544
Marriott	R-19	27,063
McDonald's	R-23	26,060
Hilton Hotels	S-91	23,136
Beverly Enterprises	S-34	17,407
THE SERVICE 500 MEDIANS		
Diversified Financial		$257,689
Utilities		236,506
Diversified Service		181,467
Transportation		106,442
Retailing		92,191
All Industries		148,654

Commercial banks, savings institutions, and life insurance companies are not included.

CHANGES IN SALES

THE TEN BIGGEST INCREASES	RANK	
Berkshire Hathaway	S-31	161.6%
Texas Air	T-9	126.7
May Department Stores	R-10	104.3
Integrated Resources	F-33	89.3
National Intergroup	S-10	75.8
American International	F-12	67.8
Allegheny Beverage	S-61	64.9
Alleghany	F-47	62.4
Centerior Energy	U-19	52.9
Fleet Financial Group	F-20	52.2
THE TEN BIGGEST DECREASES		
Salomon	F-3	75.7%
Household International	F-19	56.0
Southland Financial	F-50	54.9
Gulf+Western	S-32	53.3
Charter	S-50	48.3
Tesoro Petroleum	S-45	35.8
Bear Stearns Co.	F-10	34.1
Illinois Central Gulf Railroad	T-29	30.3
Halliburton	S-14	26.6
IU International	S-46	25.0
THE SERVICE 500 MEDIANS		**INCREASES**
Diversified Financial		17.3%
Diversified Service		12.2
Retailing		9.1
Transportation		7.5
Utilities		1.7

Commercial banks, savings institutions, and life insurance companies are not included.

CHANGES IN PROFITS

THE TEN BIGGEST INCREASES*	RANK	
Pittston	S-57	3515.9%
Missouri-Kansas-Texas RR	T-49	1688.3
CBS	S-4	1269.0
United Telecommunications	U-34	769.2
Continental	F-18	633.9
NIKE	S-63	476.5
Federal Nat'l Mortgage	F-1	396.1
Finan'l Corp. (Santa Barbara)	I-31	351.1
Dravo	S-74	337.3
Hanover Insurance	F-44	315.8
THE TEN BIGGEST DECREASES*		
Texas Eastern	U-44	96.8%
Carter Hawley Hale Stores	R-24	91.2
Delta Air Lines	T-8	81.8
Mayflower Group	T-30	75.9
Humana	S-23	74.8
America West Airlines	T-45	73.4
First Security Corp.	B-94	73.2
Kroger	R-4	71.5
Meritor Financial Group	I-5	64.5
Integrated Resources	F-33	63.8
THE SERVICE 500 MEDIANS		**INCREASES**
Diversified Financial		51.8%
Savings Institutions		46.7
Commercial Banking		20.1
Retailing		10.2
Diversified Service		7.7
Utilities		6.8
Transportation		4.5

*Listings exclude money losers.
Life insurance companies are not included.

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THE MONEY LOSERS

	RANK	LOSS
Burlington Northern	T-3	$860,485,000
BankAmerica Corp.	B-2	518,000,000*
Halliburton	S-14	515,214,000*
Pan Am	T-13	462,814,000
Union Pacific	T-4	460,000,000
MCI Communications	U-43	448,000,000
Henley Group	S-17	426,000,000
First City Banc. (Texas)	B-39	401,962,000
InterFirst Corp.	B-32	326,500,000
McLean Industries	T-24	248,773,000*
Illinois Central Gulf	T-29	171,674,000
Beneficial	F-27	171,600,000
Santa Fe South. Pacific	T-7	137,900,000
Tesoro Petroleum	S-45	124,842,000*
Texas American	B-78	115,159,000
Trans World Airlines	T-12	106,328,000*
American Medical Int'l	S-25	97,279,000
E.F. Hutton Group	F-11	90,286,000
National Intergroup	S-10	88,451,000*
MCorp	B-23	82,000,000
U.S. Home	S-76	80,071,000*
Amfac	S-36	66,599,000
Florida Federal S&L	I-27	65,461,000
Fluor	S-5	60,443,000*
Allied Stores	R-21	58,000,000
Purolator Courier	T-27	57,643,000*
AmeriFirst Fed. S&L	I-35	47,847,000
Service Merchandise	R-31	46,898,000
Tiger International	T-22	45,063,000*
Soo Line	T-32	43,315,000*
Kansas City Southern	T-38	42,242,000
United Financial Group	I-20	36,250,000*
Manpower	S-71	29,351,000
Fischbach	S-52	29,222,000*
Best Products	R-38	25,593,000
Frank B. Hall	F-49	22,452,000*
Rapid-American	R-42	20,471,000
Allied Bancshares	B-53	17,593,000
Southland Financial	F-50	16,330,000*
Safeway Stores	R-3	14,260,000
First Columbia Financial	I-47	14,254,000*
PSA	T-25	13,930,000
Grand Trunk	T-42	11,841,000
Viacom International	S-72	9,856,000
Security Capital	F-43	8,935,000
Western Capital Inv.	I-38	7,169,000
Gelco	S-69	6,408,000
Louisiana Bancshares	B-98	6,318,000
Emery Air Freight	T-26	5,440,000
Whittaker	S-56	4,946,000
Transco Energy	U-47	4,307,000
ACI Holdings	T-43	1,621,000

*Also lost money in 1985.
Life insurance companies are not included.

WHO DID BEST AND WORST AMONG THE SERVICE 500

ARRIVALS AND DEPARTURES

NEWCOMERS TO THE SERVICE 500

	RANK
ACI Holdings	T-43
Alco Health Services	S-53
Allegheny Beverage	S-61
America West Airlines	T-45
American Can	S-9
AmeriFirst Federal S&L Ass'n	I-35
Ames Department Stores	R-43
Apple Bank for Savings	I-46
Atkinson (Guy F.)	S-81
BarclaysAmericanCorp.	F-35
Braniff	T-48
CBI Industries	S-60
Capital Cities Communications/ABC	S-11
Charter Medical	S-98
Citizens Fidelity	B-100
Dime Savings Bank of New York	I-18
Empire of America Federal Savings	I-17
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HAL	T-50
Henley Group	S-17
Longs Drug Stores	R-46
M.D.C. Holdings	S-94
Maxicare Health Plans	S-73
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Missouri-Kansas-Texas Railroad	T-49
Morgan Stanley Group	F-9
National Investors Life	L-49
New York State Electric & Gas	U-49
Nordstrom	R-47
Ogden	S-66
Payless Cashways	R-49
Preston	T-40
Rite Aid	R-48
Ryland Group	S-97
Seamen's Corp.	I-39
TCF Banking & Savings	I-19
TW Services	S-38
Transcon	T-44
Viacom International	S-72

RETURNED TO THE SERVICE 500*

American Carriers (1983: T-50)	T-41
Comdisco (1983: S-99)	S-79
First Florida Banks (1984:B-100)	B-96
First Nat'l Supermarkets (1982: R-49)	R-50
Home Life (1984: L-49)	L-50
Northern States Power (1984: U-50)	U-48
Overseas Shipholding (1982: T-47)	T-46
Ramada Inns (1984: S-97)	S-99

DISPLACED FROM THE SERVICE 500

	1985 RANK
ARCO Pipe Line[1]	T-31
American Broadcasting[2]	S-17
American Security Corp.	B-99
Anixter Bros.	S-98
Associated Dry Goods[3]	R-22
BATUS[4]	R-15
BP Pipelines[1]	T-37
Blair (John)	S-69
Business Men's Assurance	F-47
Crocker National Corp.[3]	B-25
Downey Savings & Loan Association	I-42
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Georgia Federal Bank[2]	I-39
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Kaufman & Broad	S-75
MGM/UA Entertainment	S-97
Macy (R.H.)[5]	R-23
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Panhandle Eastern	U-43
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Republic Airlines[3]	T-17
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Sohio Pipe Line[1]	T-24
Third National Corp.[3]	B-84
Transworld	R-41
United of Omaha Life	L-48
Univar	S-70
Universal Leaf Tobacco[4]	S-60
Western Air Lines[3]	T-23
Wickes Cos.[4]	R-24
Williams Cos.	U-46

* Figures in parentheses indicate year and rank the last time the company was listed.

[1] Independent financial data not available.

[2] Acquired by a company on the FORTUNE 500 Industrials.

[3] Acquired by another company on the Service 500.

[4] Reclassified as an Industrial.

[5] Figures are no longer made public.

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NOTES TO THE SERVICE 500

ASSETS
Assets are those shown at the company's fiscal year-end.

NET INCOME
Net income is shown after taxes and after extraordinary credits or charges if any are shown on the income statement. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss.

STOCKHOLDERS' EQUITY
Stockholders' equity is the sum of capital stock, surplus, and retained earnings at the company's year-end. Redeemable preferred stock is excluded if its redemption is either mandatory or outside the control of the company, except in the case of cooperatives. For purposes of calculating "net income as percent of stockholders' equity," any dividends paid on redeemable preferred stock, if that stock's redemption is either mandatory or outside the control of the company, have been subtracted from the net income figure.

EMPLOYEES
The figure shown is a year-end total except when it is followed by a dagger (†), in which case it is an average for the year.

EARNINGS PER SHARE
For all companies the figures shown are the primary earnings per share that appear on the company's income statement. These figures are based on a weighted average of the number of common shares and common stock equivalents outstanding during the year. Per-share earnings for 1985 and 1986 are adjusted for stock splits and stock dividends. They are not restated for mergers, acquisitions, or accounting changes made after 1976. A double asterisk (**) signifies an extraordinary credit reflecting at least 10% of the net income shown, a double dagger (‡) an extraordinary charge of at least 10%. Figures in parentheses indicate a loss. Results are listed as not available (N.A.) if the companies are cooperatives, joint ventures, or wholly owned subsidiaries of other companies, or if the figures were not published in 1976. The growth rate is the average annual growth, compounded. No growth rate is given if the company had a loss in either 1976 or 1986.

TOTAL RETURN TO INVESTORS
Total return to investors includes both price appreciation and dividend yield to an investor in the company's stock. The figures shown assume sales at the end of 1986 of stock owned at the end of 1976 and 1985. It has been assumed that any proceeds from cash dividends, the sale of rights and warrant offerings, and stock received in spinoffs were reinvested when they were paid. Returns are adjusted for stock splits, stock dividends, recapitalizations, and corporate reorganizations as they occur; however, no effort has been made to reflect the cost of brokerage commissions or of taxes. Results are listed as not available (N.A.) if shares are not publicly traded or are traded on only a limited basis. If companies have more than one class of shares outstanding, only the more widely held and actively traded has been considered.

Total return percentages shown are the returns received by the hypothetical investor described above. The ten-year figures are annual averages, compounded. If corporations were substantially reorganized—e.g., because of mergers—the predecessor companies used in calculating total return are the same as those cited in the footnotes to the earnings-per-share figures.

Most of the figures in the FORTUNE Service 500 Directory were prepared by reporters Edward Prewitt and Sarah E. Morgenthau. The figures on per-share earnings and on total return to investors were prepared by Claudine Knight.

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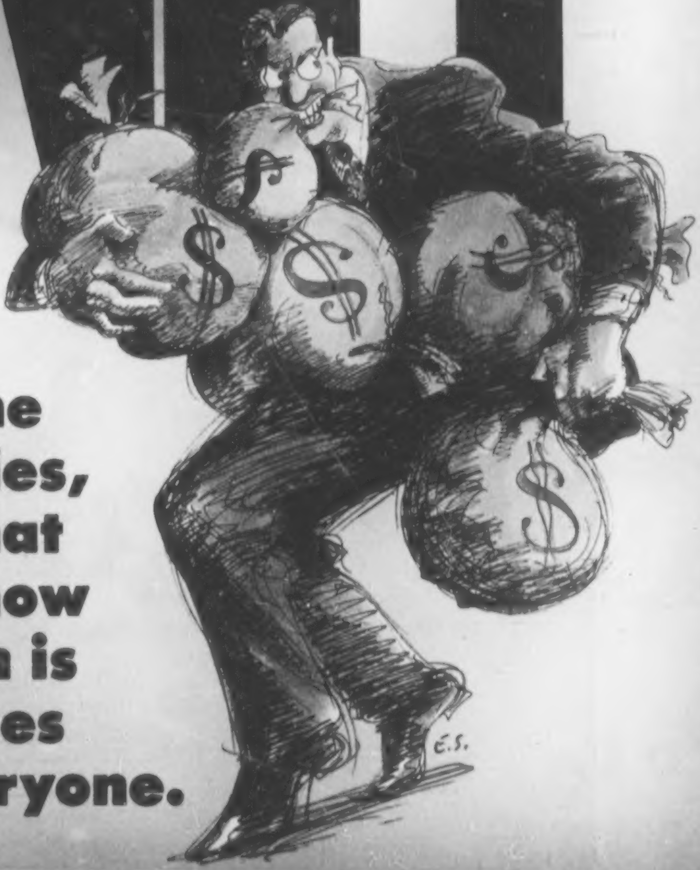
THE MONEY SOCIETY

■ **Welcome to the Roaring Eighties, where you are what you own. Here's how the new obsession is replacing old values and affecting everyone.**



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shares in secret. To give shareholders and managements a clearer picture of who is buying stock and why, Proxmire wants to cut the reporting threshold to 3% and the disclosure period to the next business day.

Top corporate executives won't have their own way entirely. Proxmire's bill restricts some of management's favorite defensive tactics. While a tender offer is pending, executives would not be able to introduce poison pills to make their companies less attractive or golden parachutes to protect themselves unless they get a special exemption from the SEC. And without shareholder approval, companies could not pay greenmail to a raider who has held the stock for less than six months.

Goodbye to the Sullivan Principles

■ The exodus of U.S. companies from South Africa is almost certain to accelerate. Leon Sullivan, the Baptist minister and General Motors board member who established the Sullivan Principles for guiding business conduct in the land of apartheid, has stopped encouraging compliance with his rules. Disgusted with the intransigence of South Africa's racist regime and the failure of businesses to catalyze change, he's calling on U.S. corporations to fold their tents.

Business leaned heavily on the guidelines, such as promoting blacks into management. Sullivan's seal of approval helped companies justify staying in South Africa despite enormous pressures to withdraw. Though Sullivan says otherwise, the code probably [illegible] work without him. Corporations would be suspect if they judged compliance with it themselves, and they will be hard pressed to find a replacement as respected and dedicated as the man who wrote the rulebook.

PAUL FETTERS

The principled Leon Sullivan imploring business to quit South Africa

Congress will revisit the issue of sanctions against South Africa this fall when the strictures it passed last year come up for review. Sullivan's pullout, coupled with the advent of the 1988 presidential elections, should strengthen the push for stronger anti-apartheid legislation. Many state and local governments already restrict or flatly prohibit their agencies from buying the products of companies that do business in South Africa.

Debt watch

■ Last May **Citicorp**'s chief, John Reed, added a staggering $3 billion to his reserves against losses on loans to developing countries, mostly Latin American nations and the Philippines. His move triggered not only a $2.5-billion loss for Citi's second quarter but also a recognition among bankers that the time for facing the hopeless reality of Third World debt had come. Since then eight major banks, including **BankAmerica**, **Chase Manhattan** and **Chemical**, have upped their reserves against such loans by a total of $9 billion, creating a pool of some $6.5 billion in red ink for the latest quarter. Who's next? Of those that haven't yet taken their medicine, the five banks in the table below have the largest exposure to Latin American loans. To bring their reserves for losses up to 3.68% of all their loans, as Citicorp has done, the banks will need to add new reserves that total $2.5 billion. The table shows what earnings for each bank would look like were they to make those moves, as estimated by Keefe Bruyette & Woods, a brokerage firm that specializes in bank stocks. It's not a pretty picture, but Wall Street generally has bid up shares of banks that admit the debt problem by increasing reserves.

THE NEXT BULLET BITERS?

BANK	LATIN AMERICAN LOANS (billions)	NEW RESERVE NEEDED (billions)	ESTIMATED 1987 EARNINGS* (millions)
Manufacturers Hanover	$7.6	$1.0	($230)
J.P. Morgan	$4.6	$0.4	$730
Bankers Trust	$3.2	$0.4	$260
Continental Illinois	$1.8	$0.3	$0
Marine Midland	$1.8	$0.4	($100)

SOURCE: KEEFE BRUYETTE & WOODS
*After adding new reserves

Eddie's prices are insane. Is he?

■ Is it greed or plain looniness? Eddie Antar, a grammar school dropout, used the slogan "Crazy Eddie: His prices are insane" to expand his Brooklyn stereo shop into **Crazy Eddie Inc.**, the most powerful consumer electronics chain in the New York metropolitan market. He went public in 1984 and realized a fortune of $68 million. Late last year when pre-Christmas sales were looking less than merry, Antar, 39, sold one-third of his holdings for about $21 million, then disappeared. The rumor on Wall Street: He was ill, perhaps fatally so.

But in mid-May Antar resurfaced, linking up with the secretive Belzberg brothers of Canada to try to take his company private at $7 a share, about half the prevailing price when he sold. Houston-based **Entertainment Marketing Inc.**, an electronics distributor, soon mounted a rival bid at $8 a share.

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LETTERS

While I commend you for thorough research, I must express my shock, indignation, and anger over your photo of a 16-year-old African-American expectant mother with her distended stomach fully exposed. Nowhere in this culture is such a display considered acceptable or in good taste. The photo insults the dignity of motherhood—and of African-American women.

ATTAH-JUNDWE OBIAJULU
Westbury, New York

Leftists in the Liberal Arts

Re "Supermarket U." (Books and Ideas, April 27): The Carnegie Foundation's finding of a "broad decline in liberal arts majors" is not necessarily evidence that "students today are less interested in learning." Purposeful students may simply be selecting the majors that offer them the greatest future value and avoiding those likely to be taught by professors who are featured in articles about Marxism on campus. A student who seems to be uninterested in learning may in reality have recognized and avoided the flawed content of certain liberal arts courses taught by leftists.

FRED W. DECKER
Corvallis, Oregon

Mr. Decker served as U.S. Deputy Assistant Secretary of Education for Research and Improvement from 1981 through 1985.

Canterbury Tales for Managers

"Putting Managers in Pigeonholes" (Books and Ideas, June 8) discovers another flaw of slick management theories built on dichotomies and stereotypes. Real people are infinitely complex. Managers who doubt this should read Chaucer's *Canterbury Tales.* In it they'll get to know an illiterate purchasing agent who is excellent in his job, as well as an apparently successful merchant who is deeply in debt. As Chaucer knew, people do not behave in predictable ways. That office ne'er-do-well, for example, may well be the company's next fast-tracker.

JOHN K. CLEMENS
Associate Professor, Hartwick College
Oneonta, New York

A Brain Drain in Coffee Makers

We have posted "Business Goes to College for a Brain Gain" (March 16), which tells how four Ph.D.s from Rensselaer Polytechnic Institute designed a "better" coffee maker for Norelco, right above our Norelco machine. Now we know why the company produced this unmatched example of design incompetence. In addition to a slow brew rate, water leakage while brewing, and a stubborn automatic shut-off mechanism, the design features a carafe that dribbles no matter how you pour. Thanks to you, none of these flaws offsets the coffee maker's entertainment value. Whenever we ordinary engineers want to needle our highbrowed academic colleagues, we ask a visitor to pour himself a cup of coffee. Then we hand him a towel and point to your article. It's our favorite pastime, and it never fails to produce a good-natured roasting of the Rensselaer Ph.D.s.

HENRY YUEN
Redondo Beach, California

Libertarians Must Be Heard

Re "Who's Ahead in the '88 Money Race" (June 8): I understand that former Congressman Ron Paul, who is running for the Libertarian party presidential nomination, has raised close to $200,000, more than many of the people on your list. Yet you did not mention Mr. Paul. I fail to understand how the democratic process is supposed to work when one of the parties on the ballot is not allowed the right to be heard.

L. A. NELSON
Huntsville, Texas

Corrections

FORTUNE*'s directory of the 50 largest diversified financial companies (June 8) should have included Commercial Credit as No. 34. The Baltimore-based company had 1986 assets of $4,863,800,000, revenues of $1,203,500,000, and net income of $45,900,000. In the same directory, revenues for Bear Stearns Cos., No. 10, should have been $2,163,923,000. Net income should have been $131,711,000, earnings per share $1.62, and net income as a percentage of equity, 20.2.* ■

Address letters to FORTUNE, Time & Life Building, Rockefeller Center, New York, N.Y. 10020. Letters may be edited for purposes of clarity or space.

INVESTOR'S SNAPSHOTS

EXPLANATORY NOTES

SALES in the Investor's Snapshots elsewhere in the magazine exclude excise taxes. Instead of sales, assets are shown for commercial banking companies, diversified financial companies, life insurance companies, and utilities, and operating revenues for transportation companies.
NET PROFIT includes any extraordinary items. Where applicable, sales and net profit for past quarters are restated to reflect mergers, acquisitions, or divestitures.
RETURN ON COMMON STOCKHOLDERS' EQUITY is calculated for the latest four quarters after subtracting dividends paid on preferred stock from net income. The five-year average is based on the last five full fiscal years.
PRICE/EARNINGS MULTIPLE is based on earnings per share for the latest four quarters.
TOTAL RETURN TO INVESTORS includes stock price changes and assumes dividends are reinvested on the date paid.

■ FORTUNE'S 18-MONTH FORECAST • CONISTON THE GIA

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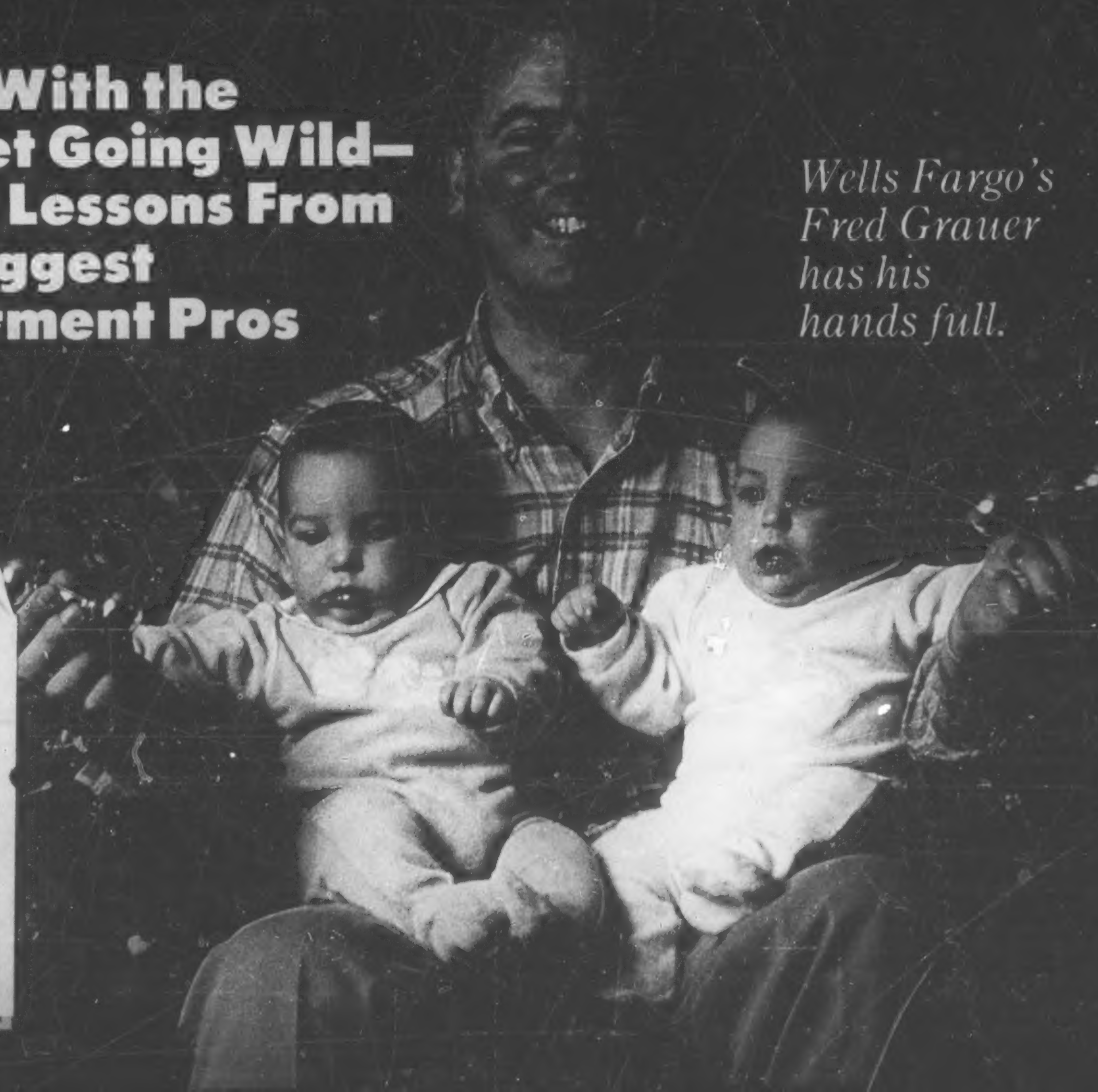
JULY 20, 1987

FORTUNE

HOW THIS MAN MANAGES $69 BILLION

And—With the Market Going Wild—Other Lessons From the Biggest Investment Pros



Wells Fargo's Fred Grauer has his hands full.

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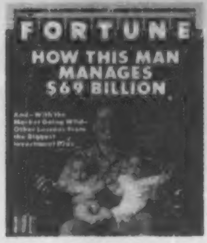
FORTUNE THE BIGGEST MONEY MANAGERS VOL. 116 NO. 2 JULY 20, 1987

JULY 20, 1987 VOL. 116, NO. 2

FORTUNE
Money & Markets



George Steinmetz photographed Frederick Grauer, president of Wells Fargo Investment Advisors, with twin sons David, left, and Andrew. The story of how the biggest money managers pick their investments begins on page 28.

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The people who control the largest pots of money in the U.S. find it harder than ever just to keep up with the market averages. *by John Paul Newport Jr.*

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free and should receive hefty royalties. Investors in Gulf & Pacific, including Tony Guccione, son of *Penthouse* publisher Bob, put up $4 million.

Kolb has targeted a group of mostly Muslim countries in the Middle East and Southeast Asia, where surveys show more than 90% of consumers know and respect Ali. The milk powder market in those regions totals about $2 billion a year at retail; as much as 70% of it belongs to **Nestlé**'s Nido brand. After months of test marketing in the United Arab Emirates, Gulf & Pacific claims to have a 12% share, thanks to a massive promotion that included a ten-day visit by the man with his face on the can.

Working with such a famous Muslim confers certain advantages. When Kolb and Ali visited Saudi Arabia recently, they came as guests of King Fahd and invited business contacts to drop by the palace where they lodged. "All of them showed up on the schedule we suggested," says Kolb, who hooked up with the powerful distributor he wanted. Primo is slated to hit the Saudi market in about six months.

Debt watch (cont'd)

■ Big banks are still taking their medicine, setting up new reserves against bad loans to the Third World, mainly Latin America. In recent weeks 15 of the 20 banks with the largest exposure have raised reserves by a total of nearly $13 billion, resulting in a combined second-quarter loss of $11 billion.

Only the five big banks listed above still hesitate; all of them are reviewing the situation. The figures for new reserves needed were calculated by Keefe Bruyette & Woods, a brokerage firm, and they assume that every bank follows the leader, **Citicorp**, which has covered 3.68% of its entire loan portfolio. Some banks that have not swallowed their dose are likely to do so by July, when they announce results for the second quarter. **J.P. Morgan**'s reticence is no sign of weakness. Before Citi set the dominoes falling by announcing a new reserve of $3 billion last May, Morgan had already taken hefty reserves. Finishing the job will hurt its earnings less than most.

THE NEXT BULLET BITERS?

BANK	LATIN AMERICAN LOANS (billions)	NEW RESERVE NEEDED (millions)	ESTIMATED 1987 EARNINGS* (millions)
J.P. Morgan	$4.6	$375	$730
Wells Fargo	$1.6	$580	($16)
Irving Trust	$1.5	$280	($40)
First RepublicBank	$1.2	$220	($80)
Bank of New York	$0.7	$310	$0

SOURCE: KEEFE BRUYETTE & WOODS
*After adding new reserves.

Who wants to start another pro league?

■ Plenty of people, apparently. An indoor lacrosse league premiered in January. The Arena Football League, which plays on 50-yard fields in indoor air-conditioned stadiums, kicked off in June. Come September, a basketball league for short people, the International Basketball Association, will stage games in which all the dribblers and jump-shot artists must be 6 feet 4 inches or under.

These offbeat ventures are run by veteran promoters wary of the overblown ambitions that have scuttled other new leagues. They want team owners who will treat their franchises as serious businesses, not tax write-offs for bored millionaires. Says Bob Cousy, former Boston Celtics great and director of operations for the IBA: "We have set things up to minimize interference by owners." The indoor lacrosse league is willing to sell franchises only on special terms. Russ Cline, the league's co-founder, explains: "We would do it like McDonald's. You could buy the franchise but you couldn't change the marketing or alter our financial controls." Rosters and salaries in these upstart sports are austere; the highest-paid Arena football player gets $5,000 for the summer season, and perhaps $50,000 next year, vs. the $1.5 million that the short-lived U.S. Football League offered its top players. The new leagues are fielding only a handful of teams, most located close to one another to keep a lid on travel costs. Breakeven points are low, about 3,000 to 7,000 spectators a game.

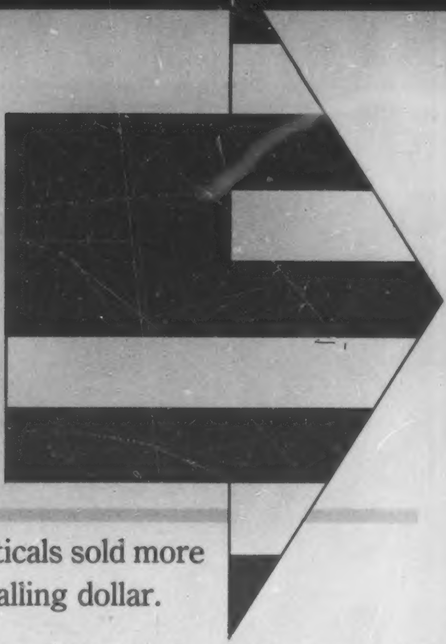
Thinking small seems to work. Arena football drew more than 10,000 fans to each of its first two games, one of them televised by ESPN, the cable network, which paid $1 million for the privilege. Cameras at the game lingered on a 13½-foot-long, unmanned miniblimp emblazoned with the logo of **Hardee's**, a fast-food chain that has paid $500,000 to become the sport's main sponsor.

Fiscal fitness is the credo these Arena football players will live by.

What price friendship?

■ After making a hostile bid of $45 a share for **JWT Group**, Martin Sorrell, chief executive of London-based **WPP Group PLC**, a marketing services company, offered $5.50 more to turn the merger into a friendly one. His goal: to keep the clients and creative talent of J. Walter Thompson, JWT's main operation and the fourth-largest ad agency in the U.S., from leaving in a snit. JWT Chairman Don Johnston felt friendship should come dearer. He bid Sorrell up to $55.50 before shaking hands. The camaraderie must be worth a lot: For $566 million, Sorrell is buying an agency with margins

AMERICA'S LEADING EXPORTERS



Makers of electronic products, planes, chemicals, and pharmaceuticals sold more abroad last year—due in part to the long-awaited effects of the falling dollar.

IF AMERICA is going to wipe out its monster trade deficit, these companies will have to lead the way—and last year they began to. The falling dollar took its own sweet time helping them out, but in the third quarter its effects finally kicked in. Result: Exports by the top 50 rose 4%, to $73 billion. Total U.S. exports rose only 2%, to $217 billion.

Manufactured goods did best. Led by electronics, aircraft, chemicals, and pharmaceuticals, they increased 5%. Agricultural exports did worst, down 10% from already depressed 1985 levels.

General Motors was America's champion exporter as measured by FORTUNE for the fifth straight year, with $8.4 billion in overseas sales. But Ford gained ground on its archrival. Partly because of improved sales to Canada of Taurus and Sable, two Ford models made only in the U.S., Ford's exports rose while GM's declined. GM's lead shrank by almost half.

Aerospace companies achieved some of the biggest gains, though one suffered the worst decline on the list. Strong sales of jet engines and avionics lifted Allied-Signal's exports a spectacular 119%. The company also got a boost from an earthbound source, its 1985 acquisition of Signal Cos. The world's biggest exporter of automobile turbochargers, Signal supplies Saab, Fiat, Volvo, and Nissan, among others. Boeing's exports rose 25% in 1986, and the Seattle company should do even better in coming years. British Airways placed a $4-billion order for 16 747s plus options for more—the biggest jetliner deal in Boeing's history—for delivery from 1989 to 1994. Northrop was the big loser. Its contract to train and support the Royal Saudi Air Force ran out, and production of the company's F-5 fighter slowed. Northrop's exports dropped by $374 million, or 38%.

Archer Daniels Midland, the Decatur, Illinois, food processor that was clobbered in export markets in 1985, bounced back to become one of the biggest gainers on the list. Despite the fall in U.S. agriculture exports overall, ADM's surged 53%. "We restructured ourselves to improve exports," says Douglas Schmalz, the company's chief financial officer. Among other moves, ADM won access to many new customers by acquiring 45% of Alfred C. Toepfer, a West German agricultural trading company with offices in 18 countries.

Of seven companies in FORTUNE's rankings of computer and office equipment makers, only Prime was up, by 13%. Prime gets almost half its sales from exports—the highest percentage of any company listed. "We serve multinational companies," says Gale Aguilar, Prime's vice president for corporate development and strategy. "Having to sell to the international market helps us see where the domestic market is heading."

IBM's exports dropped 12%—and the company was delighted. Subsidiaries overseas became increasingly self-sufficient and imported fewer U.S.-made components. Wang and Tektronix, which ranked 48th and 50th respectively on last year's list, dropped off this year. Like IBM, Wang attributes its decline to subsidiaries selling more of their own production.

Six out of eight electronics companies scored export increases, with Raytheon (No. 20) turning in the best performance. Its 23% gain came from sales of the company's Patriot air defense system to West Germany and the Netherlands. Intel, a newcomer to the list (No. 46), gained 16% because of strong demand overseas for its model 286 and 386 microprocessors. Honeywell (No. 43) suffered the second-biggest drop of any company on the list, 35%, following the sale of computer operations that had accounted for most of its exports.

STRONG EXPORTS of copiers and photographic equipment helped Kodak (No. 11 last year) climb back into the top ten. The company reformulated its Kodacolor film to compete better against films by foreign rivals Agfa and Fuji. Kodacolor sales in Japan were up.

Foreign demand for U.S. forest products grew with the dollar's decline, helping exports by International Paper and Weyerhaeuser gain 21% and 17.5%, respectively. By volume, pulp exports overall climbed 15%. Demand is expected to remain strong throughout 1987.

Philip Morris, whose Lark and Parliament brands have 70% of Japan's imported cigarette market, raised exports 18%. Japan lowered barriers against U.S. cigarettes this year, but the recent discovery of herbicides in a shipment of R.J. Reynolds cigarettes has clouded the prospect of Japan easing restrictions any further.

Newcomers Merck (No. 47) and Lilly (No. 45) are the first drug companies ever to appear in FORTUNE's top 50. The industry's exports shot up to $3.1 billion in 1986 on the strength of improved sales worldwide. Drugmakers are expected to do even better in 1987, thanks to new laws that permit exports of products not yet approved for domestic sale.

—Alan Farnham

THE FORTUNE DIRECTORY OF THE BIGGEST U.S. INDUSTRIAL EXPORTERS

RANK		COMPANY	PRODUCTS	EXPORT SALES		TOTAL SALES		EXPORTS AS PERCENT OF SALES	
1986	1985			$ THOUSANDS	PERCENT CHANGE 1985-86	$ THOUSANDS	FORTUNE 500 RANK	PERCENT	RANK
1	1	**General Motors** (Detroit)	Motor vehicles & parts, locomotives	8,366,100	−5.93	102,813,700	1	8.14	37
2	3	**Boeing** (Seattle)	Commercial & military aircraft	7,330,000	25.06	16,341,000	16	44.86	2
3	2	**Ford Motor** (Dearborn, Mich.)	Motor vehicles & parts	7,244,000	7.37	62,715,800	3	11.55	26
4	4	**General Electric** (Fairfield, Conn.)	Aircraft engines, medical systems	4,348,000	8.16	35,211,000	6	12.35	24
5	5	**International Business Machines** (Armonk, N.Y.)	Computers & related products	3,058,000	−12.30	51,250,000	4	5.97	45
6	8	**E.I. du Pont de Nemours** (Wilmington, Del.)	Specialty chemicals & energy products	2,960,000	14.95	27,148,000	9	10.90	28
7	6	**Chrysler** (Highland Park, Mich.)	Motor vehicles & parts	2,810,800	−5.61	22,513,500	11	12.48	23
8	7	**McDonnell Douglas** (St. Louis)	Aerospace & information systems	2,804,800	5.12	12,660,600	23	22.15	5
9	9	**United Technologies** (Hartford)	Jet engines, helicopters, cooling equip.	2,126,043	−0.05	15,669,157	17	13.57	20
10	11	**Eastman Kodak** (Rochester, N.Y.)	Photographic equipment & supplies	2,044,000	9.72	11,550,000	26	17.70	13
11	10	**Caterpillar** (Peoria, Ill.)	Heavy machinery, engines & turbines	2,016,000	4.56	7,321,000	47	27.54	4
12	12	**Hewlett-Packard** (Palo Alto, Calif.)	Computers, electronic equipment	1,405,000	−1.33	7,102,000	51	19.78	7
13	31	**Allied-Signal** (Morristown, N.J.)	Aircraft & vehicle parts, chemicals	1,358,000	118.68	11,794,000	25	11.51	27
14	13	**Digital Equipment** (Maynard, Mass.)	Computers & related products	1,354,339	−1.40	7,590,357	44	17.84	11
15	14	**Philip Morris** (New York)	Tobacco, beverages, food products	1,300,000	18.18	20,681,000	12	6.29	44
16	18	**Occidental Petroleum** (Los Angeles)	Agricultural products, coal	1,092,000	12.93	15,344,100	19	7.12	41
17	16	**Union Carbide** (Danbury, Conn.)	Chemicals, glasses, carbon products	1,091,000	2.44	7,828,000	42	13.94	18
18	15	**Westinghouse Electric** (Pittsburgh)	Generating equipment, defense systems	1,079,000	0.84	10,731,000	28	10.05	33
19	19	**Motorola** (Schaumburg, Ill.)	Semiconductors, radio equipment	1,061,000	10.87	5,888,000	60	18.02	10
20	24	**Raytheon** (Lexington, Mass.)	Electronic defense systems, aircraft	1,056,000	22.65	7,307,952	48	14.45	16
21	30	**Archer Daniels Midland** (Decatur, Ill.)	Protein meals, vegetable oils, flour	1,013,835	52.82	5,335,975	67	19.00	8
22	23	**General Dynamics** (St. Louis)	Tanks, aircraft, missiles, gun systems	1,003,000	14.41	9,211,400	36	10.89	29
23	25	**Weyerhaeuser** (Tacoma)	Wood products, logs, lumber	932,000	17.53	5,652,029	62	16.49	14
24	20	**Dow Chemical** (Midland, Mich.)	Chemicals, plastics, polymer products	904,000	−0.44	11,113,000	27	8.13	38
25	22	**Monsanto** (St. Louis)	Herbicides, chemicals, polymer products	873,000	−3.22	6,879,000	55	12.69	22
26	28	**Textron** (Providence)	Aerospace & consumer products	786,000	9.62	5,226,300	69	15.04	15
27	29	**Lockheed** (Calabasas, Calif.)	Aircraft	784,000	13.13	10,273,000	30	7.63	40
28	21	**Exxon** (New York)	Petroleum, chemicals	771,000	−14.71	69,888,000	2	1.10	50
29	37	**Unisys** (Detroit)	Computers & related products	749,400	−28.80	7,432,400	46	10.08	32
30	27	**Dresser Industries** (Dallas)	Pumps & energy-related equipment	649,500	−10.94	3,661,300	105	17.74	12
31	26	**ITT** (New York)	Logs, cellulose pulp	630,000	−15.21	7,895,540	41	7.98	39
32	17	**Northrop** (Los Angeles)	Aircraft & aircraft services	599,300	−38.44	5,608,400	64	10.69	30
33	36	**Minnesota Mining & Manufacturing** (St. Paul)	Industrial, electronic & health products	598,000	6.79	8,602,000	39	6.95	43
34	35	**FMC** (Chicago)	Defense equipment, chemicals	594,363	0.87	3,002,746	131	19.79	6
35	33	**Celanese** (New York)	Fibers, chemical & specialty products	542,000	−9.06	2,891,000	134	18.75	9
36	44	**International Paper** (New York)	Pulp, paper & wood products	533,000	21.14	5,501,000	66	9.69	35
37	42	**Rockwell International** (Pittsburgh)	Electronic equipment, automotive parts	493,000	10.79	12,295,700	24	4.01	48
38	39	**Deere** (Moline, Ill.)	Farm & industrial equipment	484,000	−7.63	3,516,289	111	13.76	19
39	41	**Amoco** (Chicago)	Chemicals, plastics	425,000	−10.34	18,281,000	13	2.32	49
40	40	**Phillips Petroleum** (Bartlesville, Okla.)	Liquefied natural gas, chemicals, plastics	415,000	−18.47	9,786,000	31	4.24	47
41	49	**Prime Computer** (Natick, Mass.)	Computers & related products	406,316	13.41	860,173	338	47.24	1
42	45	**Control Data** (Minneapolis)	Computers & related products	389,400	−8.66	3,346,700	119	11.64	25
43	34	**Honeywell** (Minneapolis)	Electronic components, control systems	384,000	−34.92	7,086,700	52	5.42	46
44	46	**Ingersoll-Rand** (Woodcliff Lake, N.J.)	Drills, compressors, pumps, tools	372,800	−9.97	2,799,481	139	13.32	21
45	●	**Eli Lilly** (Indianapolis)	Drugs, cosmetics & agricultural products	369,600	13.72	3,720,400	101	9.93	34
46	●	**Intel** (Santa Clara, Calif.)	Semiconductor components & products	365,994	15.97	1,265,011	256	28.93	3
47	●	**Merck** (Rahway, N.J.)	Drugs & specialty chemicals	363,900	14.72	4,128,900	91	8.81	36
48	●	**Combustion Engineering** (Stamford, Conn.)	Steam generators & power plants	357,416	13.09	2,551,469	151	14.01	17
49	●	**Cooper Industries** (Houston)	Gas compressors, electrical equipment	347,172	11.21	3,433,296	116	10.11	31
50	●	**NCR** (Dayton, Ohio)	Computers & related products	345,956	−0.02	4,881,641	75	7.09	42
		TOTALS		73,386,036		719,630,216			

■ FORTUNE'S INTERNATIONAL 500 • BUSINESSES WHERE WOMEN SUCCEED ■

AUGUST 3, 1987

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FORTUNE

THE BIGGEST BOSSES

CEOs OF THE WORLD'S 50 LARGEST INDUSTRIAL CORPORATIONS

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AUGUST 3, 1987

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FORTUNE

The World Economy
FORTUNE
THE BIGGEST BOSSES

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The CEOs share remarkably similar views on management. They agree that their most important jobs are delegating, communicating, planning, and, these days, restructuring. Exxon's Rawl delegates the minutiae of decisions to various committees, but never the responsibility. With knowledgeable people on his committees, Rawl says the right decision is obvious for him. Helmut Maucher, head of Nestlé, shrinks from details. Instead of frequent, voluminous reports, he asks his managers to submit monthly summaries. Karlheinz Kaske of Siemens, the German electronics titan, contends, "You win cooperation by explaining to talented people what you want, then giving them the authority and resources to accomplish it."

Invariably the top bosses are persuasive communicators. Mobil's Murray relies on casual dinners to help establish informality and get straight talk from his junior executives. When Kaske of Siemens encounters disagreements among his barons, he brings them together for long, liquid dinners. Nestlé's Maucher runs taste tests of the company's products during management meetings. Just try using business school jargon to describe your reaction to a Crunch bar. Lee Iacocca and Armand Hammer communicate on a grander scale: Their books, *Iacocca* and *Hammer*, have been best-sellers.

Planning is not only long range, but global. Romano Prodi, chief executive of state-owned IRI, Italy's biggest industrial holding company, tells his managers that they must look far beyond Italy. Cor van der Klugt of Philips, the Dutch electronics firm, demonstrated his worldwide vision when he decided to share Philips' technology for compact disk players with archrival Sony of Japan. "Sometimes you have to let the enemy inside," he says. The result was a single world standard for compact disk players and royalties for Philips.

THINKING long term often means restructuring. By selling Alfa Romeo and unloading several minority stakes in other companies, Prodi of IRI raised $4 billion for his debt-ridden company. Wolfgang Hilger, chief executive of Hoechst, restructured by diversifying. Last year he acquired Celanese, No. 134 among the largest U.S. industrials.

Restructuring could not shield the top 50 companies from the buffets of the world economy. Total sales and profits declined for the first time since 1982, largely because oil companies were hit with a deep slump in prices. As crude dropped from $28 a barrel in

THE WORLD'S 50 BIGGEST INDUSTRIAL

RANK		COMPANY	HEADQUARTERS	INDUSTRY	SALES	NET INCOME
1	1	**General Motors**	Detroit	Motor vehicles and parts	102,813,700	2,944,700
2	2	**Exxon**	New York	Petroleum refining	69,888,000	5,360,000
3	3	**Royal Dutch/Shell Group**	The Hague/London	Petroleum refining	64,843,217	3,725,779
4	6	**Ford Motor**	Dearborn, Mich.	Motor vehicles and parts	62,715,800	3,285,100
5	7	**International Business Machines**	Armonk, N.Y.	Computers	51,250,000	4,789,000
6	4	**Mobil**	New York	Petroleum refining	44,866,000	1,407,000
7	5	**British Petroleum**	London	Petroleum refining	39,855,564	731,954
8	12	**General Electric**	Fairfield, Conn.	Electronics	35,211,000	2,492,000
9	10	**American Tel. & Tel.**	New York	Electronics	34,087,000	139,000
10	8	**Texaco**	White Plains, N.Y.	Petroleum refining	31,613,000	725,000
11	16	**IRI**	Rome	Metals	31,561,709	197,118
12	14	**Toyota Motor**	Toyota City (Japan)	Motor vehicles and parts	31,553,827	1,717,733
13	31	**Daimler-Benz**	Stuttgart	Motor vehicles and parts	30,168,550	831,600
14	11	**E.I. du Pont de Nemours**	Wilmington, Del.	Chemicals	27,148,000	1,538,000
15	20	**Matsushita Electric Industrial**	Osaka	Electronics	26,459,539	946,571
16	18	**Unilever**	Rotterdam/London	Food	25,141,672	973,983
17	9	**Chevron**	San Francisco	Petroleum refining	24,351,000	715,000
18	30	**Volkswagen**	Wolfsburg (W. Germany)	Motor vehicles and parts	24,317,154	286,133
19	21	**Hitachi**	Tokyo	Electronics	22,668,085	679,609
20	15	**ENI**	Rome	Petroleum refining	22,549,921	342,275
21	19	**Chrysler**	Highland Park, Mich.	Motor vehicles and parts	22,513,500	1,403,600
22	28	**Philips' Gloeilampenfabrieken**	Eindhoven (Netherlands)	Electronics	22,471,263	414,418
23	32	**Nestlé**	Vevey (Switzerland)	Food	21,153,285	994,566
24	●	**Philip Morris**	New York	Tobacco	20,681,000	1,478,000
25	29	**Siemens**	Munich	Electronics	20,307,037	629,353

▨ **U.S. companies** ☐ **Non-U.S. companies** ● Not on last year's list.

January 1986 to $14 in December, four petroleum companies dropped from the top 50. The biggest was Mexico's government-owned Pemex, the world's 22nd-largest industrial in 1985. Hurt also by the declining peso, Pemex's revenues plunged 45%. Sales of the 15 oil companies still on the list slid 23% in 1986, and profits dropped 19%. Atlantic Richfield went from No. 17 on last year's list to No. 45. Alone among the big oil companies, Kuwait Petroleum raised revenues, by 2%. But that was in dollars. In Kuwaiti dinars, sales were flat, and earnings fell 74%.

Like a magic mirror, the continued weakness of the dollar made many foreign companies look better than they really were. Philips' revenues declined 8% in Dutch florins, but rose 24%, to $22.5 billion, when converted to dollars. Toshiba, a newcomer to the top 50 with revenues of $15 billion, saw its sales rise less than 1% in yen, but a healthy 11% in dollars. A 6% decline in revenues for Britain's Imperial Chemical Industries looked like a 7% increase when viewed from the U.S.

French automakers Renault and Peugeot also got a lift from the dollar, but they increased unit sales as well. The two clambered over some fallen petroleum refiners to break into the top 50 for the first time. Daimler-Benz became Germany's largest industrial company after acquiring AEG, the electronics firm. Its sales rose 25% in deutsche marks, moving Daimler-Benz from No. 31 last year to No. 13 this year, the sharpest move up of any company that made the top 50 list in both years.

Detroit accelerated briskly. Combined sales for U.S. automakers were up 10%. Ford's rose 19%. With the start-up costs for its new Taurus and Sable models behind it, Ford earned $3.3 billion, ahead of GM for the first time in half a century. GM's sales reached a record $102.8 billion, but the company lost share. Chrysler's revenues increased 6%, yet earnings dropped 14% because management spent heavily to retool.

The world's largest consumer products companies had a sparkling year, with total sales up 27%. Mainly because of acquisitions, Procter & Gamble and RJR Nabisco, absent last year, returned to the list. Roughly one-third of RJR Nabisco's 1986 sales came from Nabisco Brands, which it bought for $4.9 billion. Rival Philip Morris picked up General Foods late in 1985 for $5.6 billion. The acquisition helped push up sales 70%, to $20.7 billion, and Philip Morris came onto the list for the first time, vaulting to No. 24. **—Terence Paré and Wilton Woods**

CORPORATIONS

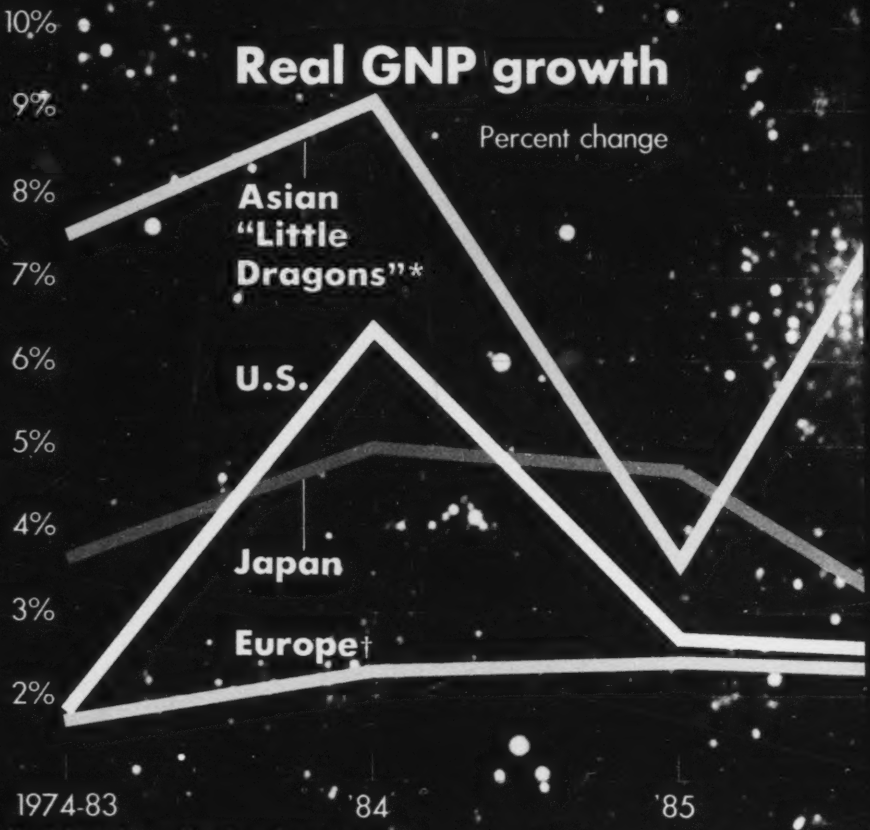
RANK		COMPANY	HEADQUARTERS	INDUSTRY	SALES	NET INCOME
26	27	**Nissan Motor**	Yokohama	Motor vehicles and parts	**20,141,237**	**158,477**
27	41	**Fiat**	Turin	Motor vehicles and parts	**19,669,581**	**1,449,556**
28	36	**Bayer**	Leverkusen (W. Germany)	Chemicals	**18,768,914**	**391,745**
29	38	**BASF**	Ludwigshafen (W. Germany)	Chemicals	**18,640,985**	**416,418**
30	13	**Amoco**	Chicago	Petroleum refining	**18,281,000**	**747,000**
31	●	**Renault**	Paris	Motor vehicles and parts	**17,661,021**	**(844,233)**
32	40	**Hoechst**	Frankfurt	Chemicals	**17,509,344**	**568,152**
33	24	**Elf Aquitaine**	Paris	Petroleum refining	**17,287,058**	**617,833**
34	●	**RJR Nabisco**	Atlanta	Tobacco	**16,998,000**	**1,064,000**
35	42	**Samsung**	Seoul	Electronics	**16,522,664**	**182,175**
36	49	**Boeing**	Seattle	Aerospace	**16,341,000**	**665,000**
37	43	**Mitsubishi Heavy Industries**	Tokyo	Motor vehicles and parts	**15,932,973**	**299,241**
38	34	**United Technologies**	Hartford, Conn.	Aerospace	**15,669,157**	**72,727**
39	●	**Procter & Gamble**	Cincinnati, Ohio	Soaps, cosmetics	**15,439,000**	**709,000**
40	39	**Occidental Petroleum**	Los Angeles	Food	**15,344,100**	**181,100**
41	●	**Peugeot**	Paris	Motor vehicles and parts	**15,152,869**	**518,350**
42	●	**Toshiba**	Tokyo	Electronics	**15,036,390**	**268,916**
43	46	**Imperial Chemical Industries**	London	Chemicals	**14,867,911**	**817,031**
44	33	**Petrobrás (Petróleo Brasileiro)**	Rio de Janeiro	Petroleum refining	**14,701,534**	**2,073,456**
45	17	**Atlantic Richfield**	Los Angeles	Petroleum refining	**14,585,802**	**615,116**
46	37	**Tenneco**	Houston	Petroleum refining	**14,558,000**	**(39,000)**
47	26	**USX**	Pittsburgh	Petroleum refining	**14,000,000**	**(1,833,000)**
48	48	**Kuwait Petroleum**	Safat (Kuwait)	Petroleum refining	**13,911,716**	**184,562**
49	25	**Total Cie Française des Pétroles**	Paris	Petroleum refining	**13,821,041**	**(68,006)**
50	●	**Thyssen**	Duisberg (W. Germany)	Metals	**13,818,174**	**150,463**
		TOTALS			**1,314,848,294**	**48,341,578**

THE OUTLOOK IS

PHOTOGRAPHS BY U.S. NAVAL OBSERVATORY, R.J. DU FOUR/RICE UNIVERSITY, NASA, JET PROPULSION LABORATORY

IT COULD BE a lot worse: As the world's major industrial economies enter their fifth straight year of expansion, they are looking at steady, unspectacular growth. That's a comedown from the hopes of last year, when cheap oil and low interest rates looked as if they might combine to energize the world economy. They did not, but the shrinking U.S. trade and budget deficits—and prospects of further shrinkage—are engendering more moderate and realistic hopes. So figure that the U.S., Europe, and Japan will muddle along with annual growth of 2.5%.

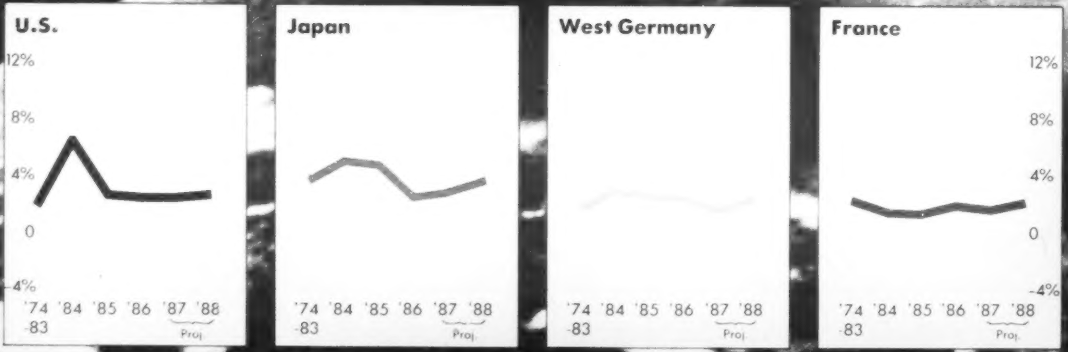
Even at their sluggish pace, the major economies proved remarkably resilient earlier this year when they quickly adjusted to two dramatic swings: a runup in the price of oil and a steep decline in the dollar. But the world's policymakers worry that such a low-horsepower engine gives them little ability to put some persistent problems behind them. Unemployment in Europe still hovers at post-Depression highs. In-



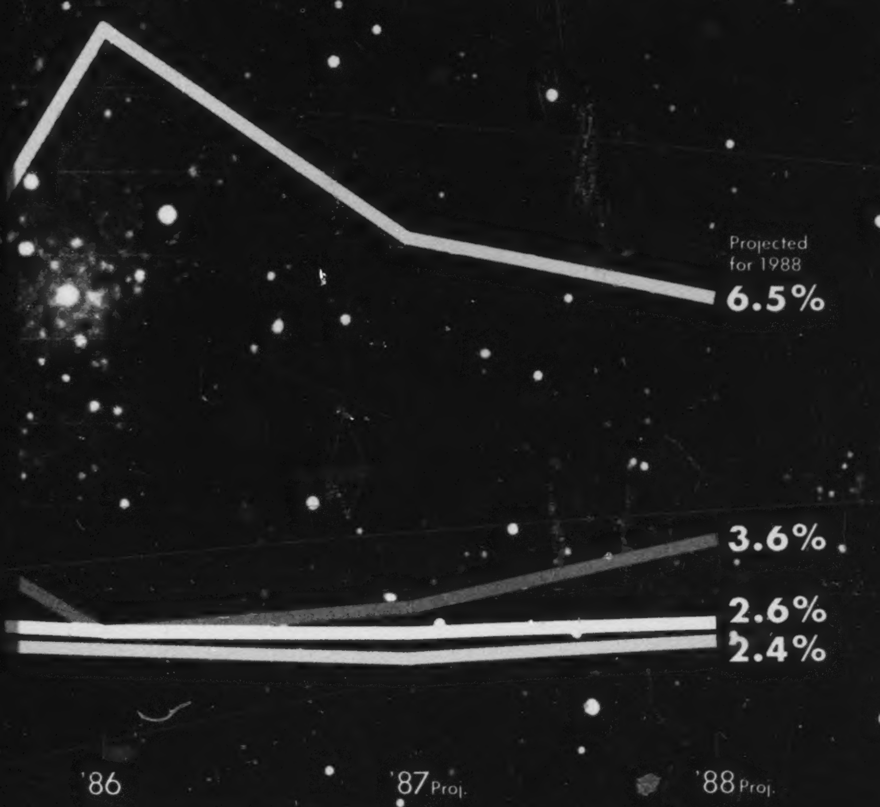
*South Korea, Taiwan, Hong Kong, Singapore.
†West Germany, Britain, France, Italy.

Modest Prospects

■ The tortoise will outrun the hare this year as Britain's GNP grows a remarkable 3.9%, while Japan's should increase 2.8%—satisfactory by most standards, slow by Japanese. Data Resources projects that West Germany's export-driven economy will be hard hit by the appreciation of the mark against European currencies and the dollar. A rise in the price of oil will help boost Mexico. Asia's "Little Dragons" will continue to surpass the major industrial nations. The charts at right and above show average annual growth rates.



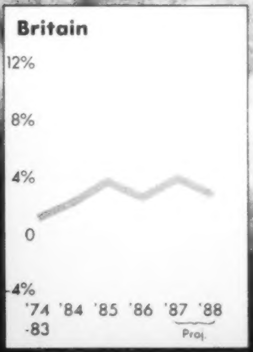
EARTHBOUND

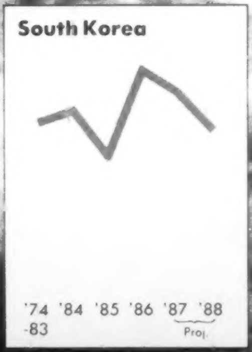


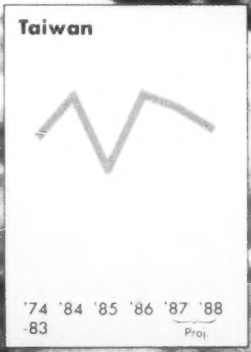
terest payments on debt owed by developing countries still gobble up too much of their export earnings and reduce demand for imports. While U.S. bankers finally faced facts and increased loss reserves on Third World loans, such moves do nothing to reignite growth in those weak economies.

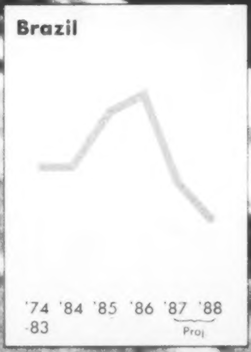
With some luck, the specter of U.S. protectionism will not be as difficult to handle as Third World debt. A favorable shift in the U.S. balance of trade may avert pernicious protectionist legislation. Now that the weak dollar has made American goods more competitive, the country cannot afford to anger the nations that will buy most of its products. The surplus giants, Japan and West Germany, are even starting to help. With a $43-billion economic stimulus package in the works, Japan seems more serious than ever before about spurring domestic demand. Germany has cut taxes, though it is reluctant to do much more for fear of raising inflation.

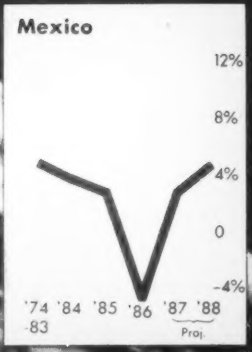
The June economic summit in Venice disappointed those whom it didn't put to sleep. But the industrialized nations can rarely agree on sweeping change except in a crisis, and with the world economy plugging along and its major problems at least being addressed, it seems hard to argue with the lulling message from the Venetian canals: Leave well enough alone for now. **— Carrie Gottlieb**



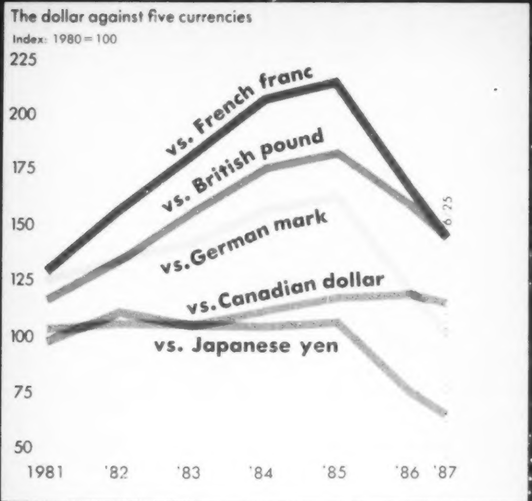






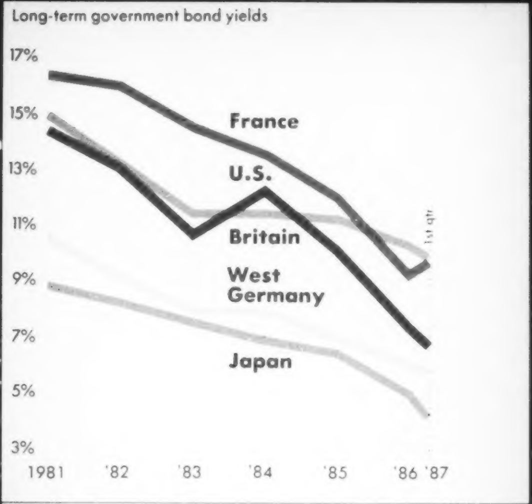


ALL FIGURES: DATA RESOURCES (EXCEPT THOSE FOR BUYERS OF U.S TREASURIES: DEPARTMENT OF COMMERCE AND SALOMON BROTHERS)
DESIGN: NIGEL HOLMES CHARTS: NINO TELAK



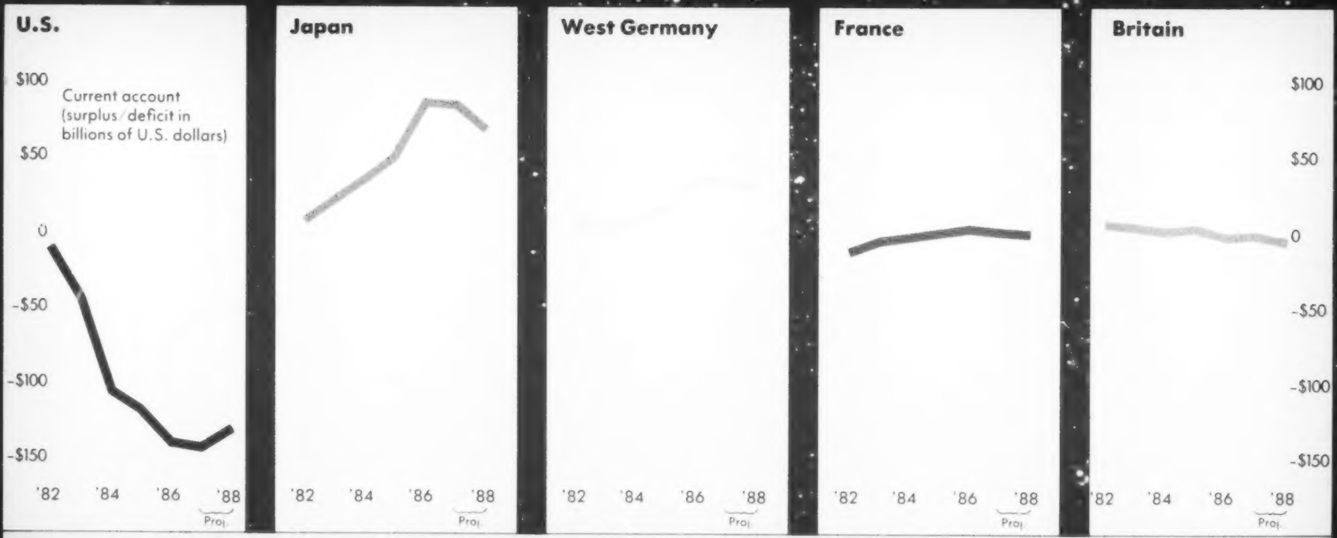
The Dollar

■ No event has so influenced the world economy in the past 18 months as the dollar's plunge. Since 1985 it has depreciated 40% against the yen and the deutsche mark. Many finance ministers think that's low enough and are trying hard to stabilize the buck.



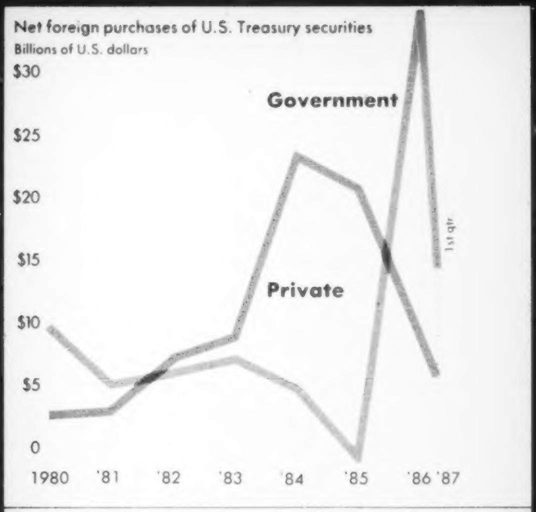
Interest Rates

■ The downward spiral of U.S. rates reflects long-term optimism on inflation. But with the U.S. budget deficit expected to be around $170 billion this year, rates are unlikely to fall much further. Investors still consider U.S. government bonds the world's safest.



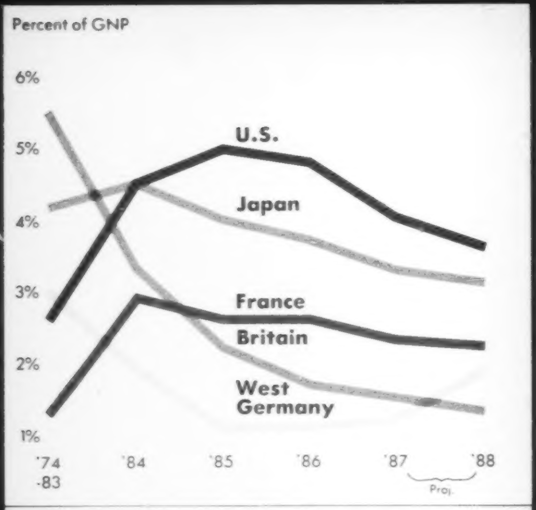
Current Accounts

■ The falling dollar will have its effect—eventually. This year a huge U.S. merchandise trade deficit will perpetuate that giant deficit on current account (exports of goods and services minus imports). Japan will continue to enjoy a vast current account surplus this year. A weak dollar and strong yen will finally reverse the trends next year.



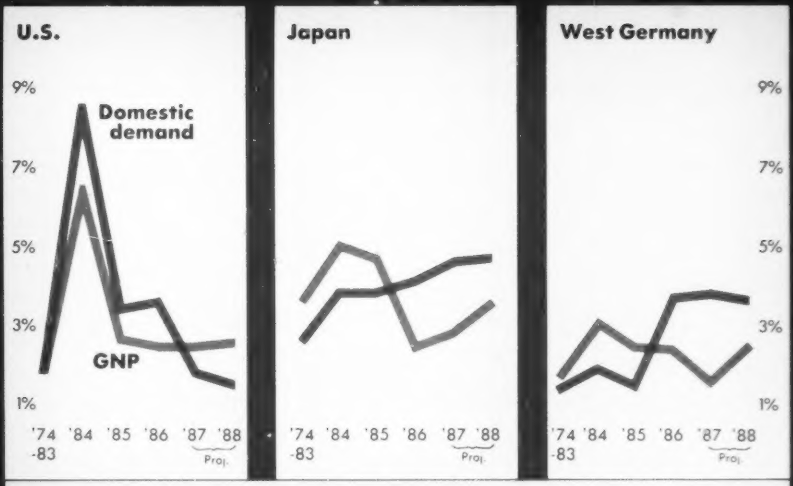
Buyers of U.S. Treasuries

■ In trying to buoy the dollar, foreign governments have massively increased their holdings of U.S. bonds. Selling bonds to foreigners lets them influence U.S. monetary policy (they could sell as quickly as they bought) but frees domestic funds for investment.



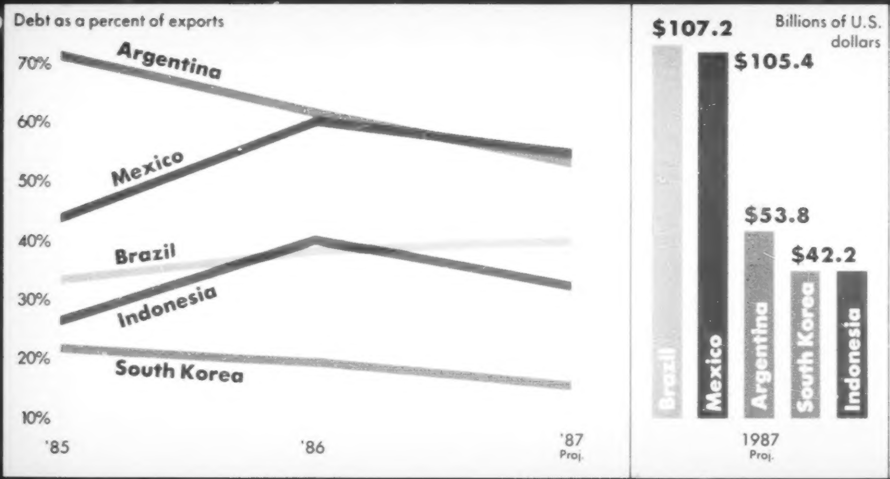
Government Deficits

■ The prospect of higher capital gains taxes in 1987 prompted Americans to sell assets—and incur taxes—in 1986, helping reduce the U.S. deficit. All major industrial countries but Germany, which is cutting taxes, will reduce deficits moderately.



Total Output vs. Domestic Demand

■ This year the U.S. will begin to rely more heavily on exports to fuel growth, as consumption growth slows. The slackening of U.S. domestic demand will help correct the nation's current account deficit. In Germany and Japan, domestic demand will grow faster than production for the second year in a row.

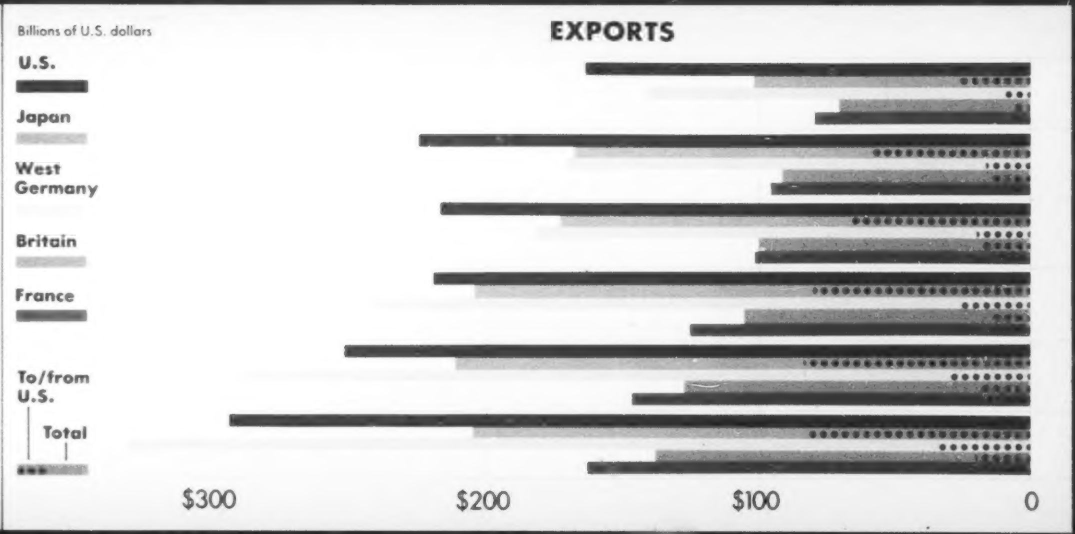


LDC Debt

■ Of these countries, only South Korea has paid down its foreign debt with proceeds from exports. The others borrow more each year just to finance interest payments—retarding growth, depressing living standards, and shrinking the market for U.S. exports.

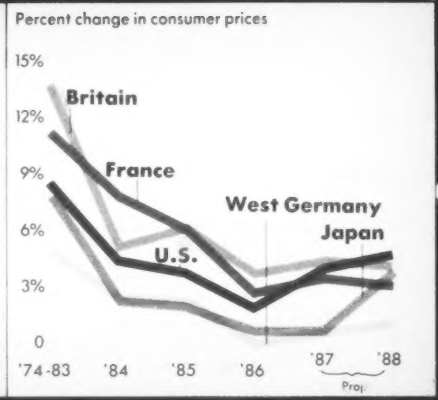
Exports and Imports

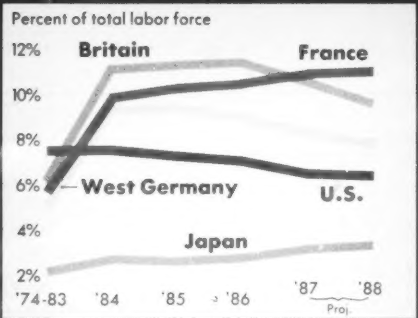
■ America will still be the world's most voracious consumer, but exports will finally rise apace with imports. Japanese exporters, already reeling from two years of dwindling profit margins and steep competition from Korea and Taiwan, face more bad news. Their sales to the U.S.—and the rest of the world—should fall in 1988. British, French, and German exporters will sell more.



Inflation

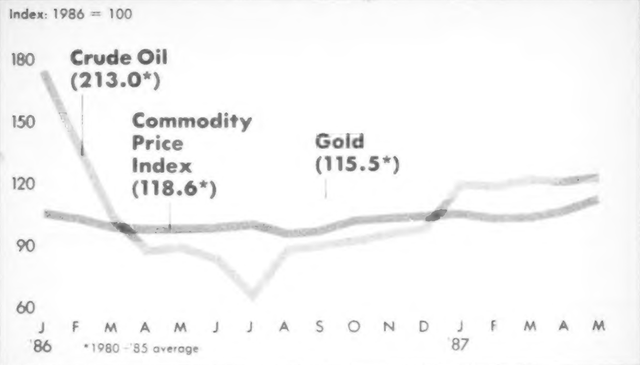
■ After bottoming out last year, inflation is on the upswing worldwide, pushed by rising oil prices. Forecasters think the effects will not be dramatic. Restraining prices in Japan and Europe: strong currencies, which are working to keep imports cheap.





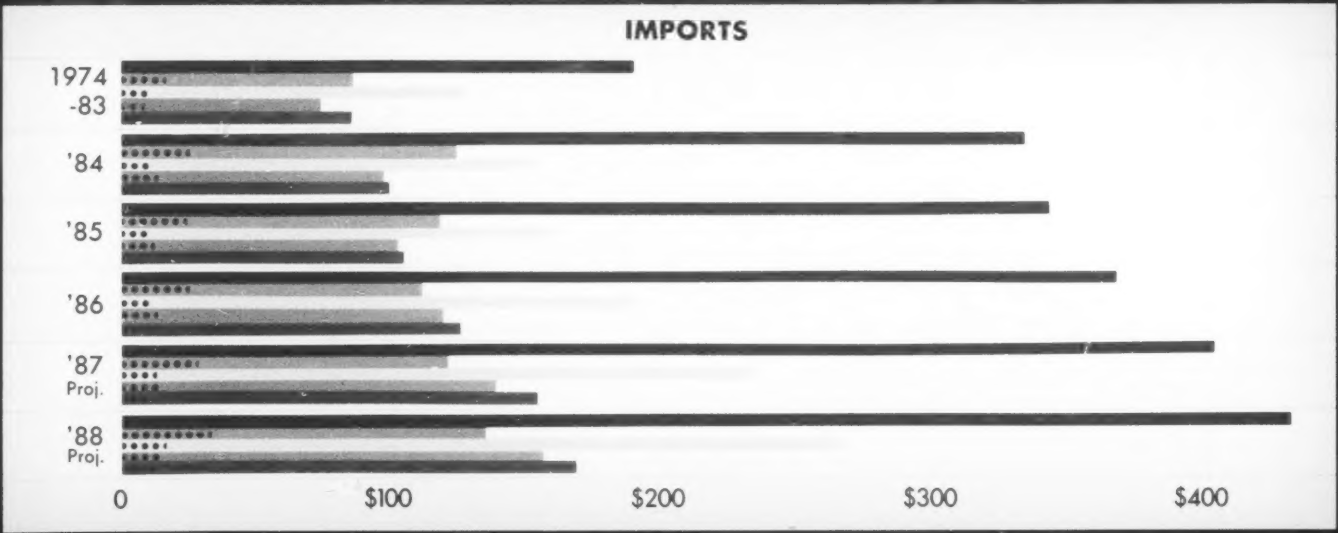
Unemployment

■ A rise in service jobs has reduced U.S. unemployment. A flurry of business start-ups and bustling financial markets have put people to work in Britain.



Commodity Prices

■ From an average index value of 213 between 1980 and 1985, oil fell almost to 60 last year. Other prices have varied less. ■



SELLING

DISCOUNTERS IN THE DUMPS

Once again the electronics retailers have overexpanded. Invading each other's turf, they touched off price wars that are pounding profits after years of astounding growth. ■ *by Bill Saporito*

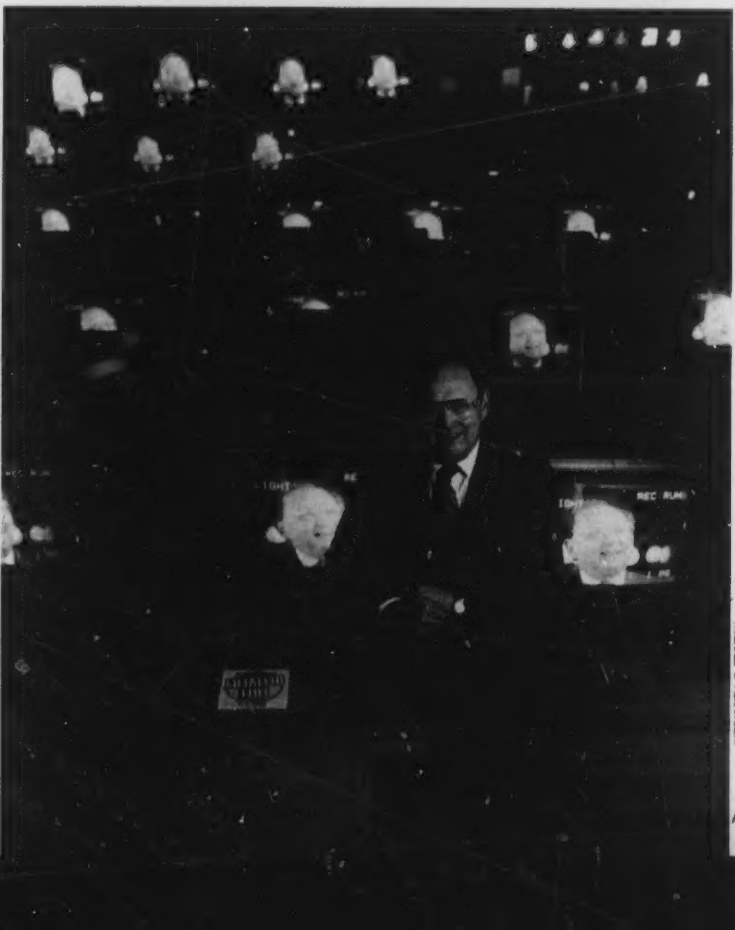
FOR THE PAST FOUR YEARS a bunch of hip dudes who operate discount audio-video appliance stores played a fabulous gig with the cats on the Street. Between 1982 and 1986 they cut a long-playing record together: Compound growth hummed along at more than 25% annually, and a dozen companies went public to that Wall Street beat of expand, expand, expand. Says David Mondry, chairman and CEO of Highland Superstores, the second biggest of the national chains: "You could do no wrong. Even an idiot could have made money then."

Last year the record began to warp. While many companies boosted sales with new store openings, sales in existing stores lagged. Sales growth of electronic gadgets had slowed to about 10%, a figure that would not have most industries wailing the blues. But the top ten discounters had expanded their store space more than 25%. The charts aren't rockin' this year either; revenue growth is likely to subside to less than 5% industrywide. Profits are taking a pounding. Last year Highland's earnings fell 15% despite a sales increase of 26%, which came mainly from opening new stores. Federated Group, the fourth-largest discounter in the business, lost $5 million despite an 18% rise in sales. Even the group's best performer, Circuit City Stores, whose profits were up 60% on a 43% increase in sales, closed its 15 Lafayette stores in New York City because they were lackluster earners.

Wall Street, characteristically, is rewinding the group's share prices. Since the second quarter of 1986, most publicly held discounters lost about half their market value. Says Wilfred Schwartz, chairman of Federated Group: "There's no question that the industry is in turmoil at the moment."

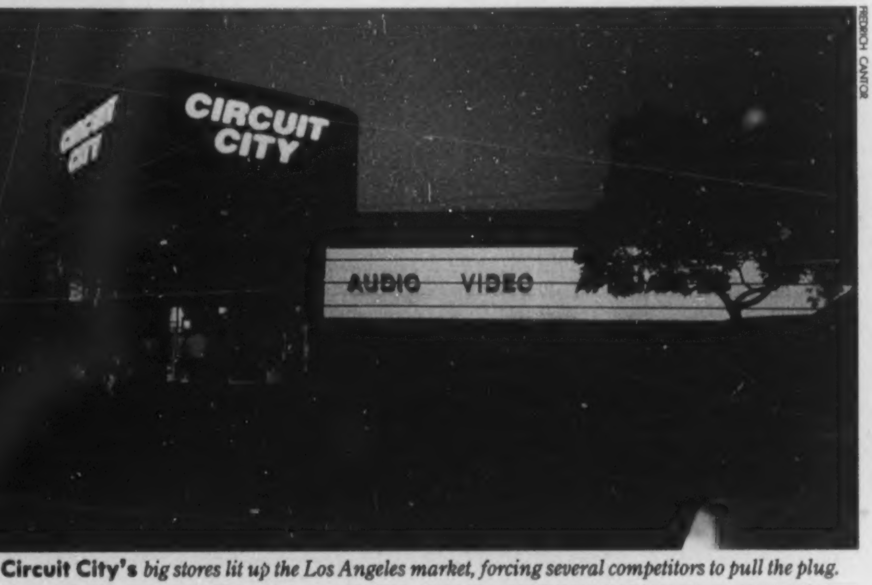
The turmoil peaked in June when the Brooklyn-born discount electronics firm known as Crazy Eddie revealed that the Securities and Exchange Commission was investigating the activities of its founder, Eddie Antar. Antar and First City Capital Corp. offered to take his $353-million-a-year company private for $7 a share. But in November 1986 he had dumped 1.5 million shares at $14—several months before Crazy Eddie announced a 90% plunge in fourth-quarter earnings. The SEC may want to know whether, when Antar sold, he knew something other investors didn't. Crazy Eddie's profits were pummeled in combat with such tough competitors as Newmark & Lewis, which had 18 stores, almost all on Long Island, and decided to move onto Eddie's block in the New York City market. Recently another offer for Crazy Eddie surfaced at $8.

The audio-video discount business is in the middle of a classic phase of the retail cycle: one in which a jumble of high-growth, entrepreneurially managed companies will compress into a handful of well-run outfits. The main engine for rapid growth has been sales of videocassette recorders, a product that hit the mass market only five years ago. "Our industry has never seen the likes of a fuel like the VCR," says Richard D. Lewis, CEO of Newmark & Lewis. "Even the growth of television in the Fifties was not as explosive." Last year the industry sold 13.2 million VCRs, up from 4.1 million in 1983, reports the Electronic Industries Association, a manufacturers' trade group. Today Sam is playing it again and again in 45% of the nation's homes. The growth in sales has been accompanied by a rab-



MICHAEL L. ABRAMSON

Stores multiply *for CEO David Mondry of Highland, but profits divide.*



FREDRICH CANTOR

Circuit City's *big stores lit up the Los Angeles market, forcing several competitors to pull the plug.*

bitlike proliferation of stores. In two years Newmark & Lewis, for example, has practically doubled from 25 to 44 outlets.

Now the industry is caught in a squeeze: VCR sales are leveling off while prices are falling. At the same time, intense market wars are eating up profits in such other lines as microwave ovens and large appliances. Analyst Donald Trott of Dean Witter Reynolds likens the situation of the electronics crowd to the development days of the fast-food chains and discount department stores. Says he: "In discount stores the leadership companies in the Fifties and early Sixties—Korvettes, Two Guys—went out of business because growing competition eventually put a lot of pressure on their operations and their margins. Most of the companies in the consumer electronics industries have also been large mom-and-pop operations. They are phase-one companies, and now we're heading into phase three." In this new phase even the most optimistic managers expect some attrition. Among the survivors, according to Trott, will be Best Buys, Circuit City, Federated, Highland, and Newmark & Lewis.

The consumer electronics business is a two-headed monster that feeds on a growing economy and a stream of new products. For the past three years it had both. But VCR sales are likely to remain almost flat this year at 13.7 million units. That kind of volume is not so bad, but prices are dropping faster than Joan Rivers's ratings. "Every time we think we hit bottom, it goes lower," lamented one buyer to *This Week in Consumer Electronics*, a trade magazine.

The industry's runaway growth was fueled by all that cash raised in public offerings. "Wall Street began beating the country to see how many companies it could throw money at," says Federated's Wilfred Schwartz. "Now the industry is overfunded and overexpanding." Federated caught its bundle of public cash in 1983 and has almost quadrupled sales to $431 million and stores to 66. Highland took investors' money in 1985 and ran its size up to 61 outlets from 33; another 11 are abuilding. Fretter Inc., Good Guys, Luskin's, Newmark & Lewis, and Tipton Centers were among the others to go public and start doubling. Most analysts say there is only room for two of these so-called power retailers in most markets.

Economics of the business dictate that a chain must have a heavy presence in any local market it serves. Concentration provides economies of scale, particularly in advertising, which normally eats up 5% to 8% of sales. Highland, for instance, will have built 14 stores in Chicago in the two-year period ending next February. About 350,000 people support one store, so when a couple of these discounters butt into each other, the crash of falling prices can be loud. Highland is invading the Minneapolis and Milwaukee turf owned by Best Buy; Lechmere, a division of Dayton Hudson Corp., made a foray into Circuit City's Atlanta stronghold; Highland and Fretter will be slugging it out in Lechmere's New England home. New York City is an inferno of five chains and countless other local discounters. Even smaller markets are not immune. In 1986, Silo, now owned by Dixons PLC, the largest electronics retailer in Britain, blasted into the Portland, Oregon, area with four stores and a warehouse.

When these retailing Goliaths hit town, there's not much room left for the local David. Circuit City and Federated both operate superstores that range from 20,000 to 35,000 square feet, the size of many supermarkets. These are known as destination stores, ones you decide to visit before you leave home. They are big enough to display lots of different models of every conceivable VCR, television, stereo speaker, or compact disk player. Many of these companies began life as dealers in white goods—that is, refrigerators and dishwashers—and they still sell these products as well. Circuit City has about 200 televisions on its sales floor, which is laid out in a racetrack format. A red linoleum path circles around the place to ensure that cus-

Back-room efficiency, *such as this automated warehouse, gives Circuit City a competitive edge.*

BILLY GRIMES

REPORTER ASSOCIATE *Sarah Smith*

tomers are directed into the various departments.

The size of these marts and their huge inventories make them prisoners of sales volume. In order to be profitable, a store of 20,000 square feet usually has to generate about $10 million in annual sales, which is about twice the sales-per-square-foot ratio of the best department stores. That kind of volume can come only at a price—low prices, in fact—that yields average gross profit margins of 25% to 35% of sales and a net profit of less than 4%. Crazy Eddie's commercials scream his prices are *insane*, and it certainly doesn't take a lick of intelligence to cut prices. But it does take an enormous amount of logically channeled neurological activity to make a buck with such thin margins.

COMPANY	DATE OF PUBLIC OFFERING	AMOUNT RAISED in millions	PRICE PER SHARE	RECENT PRICE
Audio/Video Affiliates	7/17/84	$9.7	$4.88	$6.75
Best Buy	4/15/84	$8.1	$4.50	$14.75
Circuit City	12/12/61	$.5	$.20	$39.25
Crazy Eddie	9/13/84	$11.8	$2.00	$6.00
Federated Group	11/15/83	$9.6	$8.33	$4.75
Fretter	5/7/86	$34.8	$16.00	$5.00
Good Guys	2/6/86	$9.3	$14.00	$4.50
Highland Superstores	5/9/85	$52.5	$18.50	$10.50
Luskin's	6/3/85	$3.7	$14.50	$4.00
Newmark & Lewis	6/27/85	$8.9	$8.00	$8.25
Sound Advice	6/27/86	$3.7	$7.50	$5.00
Stereo Village	5/11/84	$1.4	$4.00	$.50
Tipton Centers	7/11/86	$10.0	$15.00	$6.00

A shower of money—then a market bath

Over a two-year period, many discounters were led to the public trough by enthusiastic underwriters. As retailers' profits waned, so did their stock prices.

One company that has not been thrown off its stride by price cutting is Circuit City, now the biggest company in brand-name consumer electronics. Over the past five years, the Richmond, Virginia, company's revenues have grown at an annual compound rate of 42%, and earnings growth is galloping along at 65% a year. Industry downturn or not, the company's sales from existing stores, a critical factor in judging the strength of its business, were up 18% in the fiscal year that ended this February. Circuit City had the good fortune, as it turned out, to outgrow its hometown market sooner than any of its competitors did and to be early in its expansion into other localities. Says Richard Sharp, president and chief executive: "For years this company has run a dispersed business, so we had to develop control systems."

The company trumpets Sharp's rise to the top job last year as the completion of its transition to professional management. His expertise is in so-called back-room systems, whereas his predecessor, Alan Wurtzel, was a member of the founding family and a terrific merchandiser. Before becoming president, Sharp completely revamped the company's distribution system. Circuit City's three warehouses are now to-

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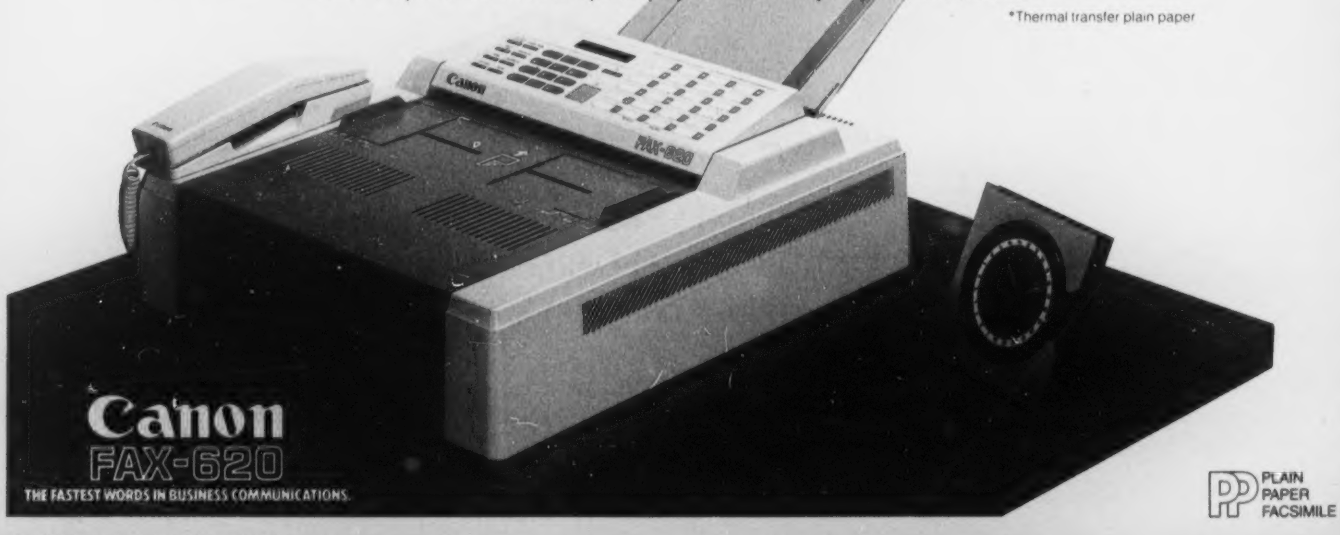
*Thermal transfer plain paper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THE FASTEST WORDS IN BUSINESS COMMUNICATIONS.

PLAIN PAPER FACSIMILE

tally automated. In the Atlanta warehouse, for example, about a dozen employees per shift handle merchandise worth $400 million. Sharp boasts that Circuit City is the industry's low-cost retailer, a status that allows it to compete aggressively with anyone. Indeed, the company's advance into Los Angeles was unprecedented. Since November 1985, Circuit City has built 19 stores and claims to have more than 15% of the market, twice the share of its nearest competitors.

MANY OTHER discount chains have fared less well with their incursions into new markets. Federated launched a major expansion into Texas in December 1984, hoping to stake a big claim in that huge market. But Highland, which built 18 stores, and Tandy Corp.'s McDuff chain, which now has 41 stores in the Lone Star State, have similar ideas. Needless to say, with its oil economy recently in shambles, Texas has been an electronic dry hole.

Tandy's Radio Shack, headquartered in Fort Worth, is the leading private label in the business. With McDuff, Tandy is tuning in to the name-brand business. In 1985 it acquired the 24 stores of Memphis-based Scott-McDuff Corp. and a chain called Video Concepts from Jack Eckerd Corp. Since then the company has also expanded McDuff's into Denver, Kansas City, San Jose, and Tampa, following a marketing strategy that is a variation of Radio Shack's effort to intercept customers at every corner. McDuff has 168 small stores in shopping malls that mostly sell big-screen TVs and VCRs, and 121 large stores that hawk the entire product array of audio and video equipment. The mall stores give Tandy a shot at a captive audience; the big stores generate the high volume and buying power needed to keep the prices at both places low. "Our aspirations are to be *the* player in name brands," says Clint Thomas, the division president. Though McDuff is expected to do $400 million in sales this year, competitors wonder if Tandy can keep the volume turned up. While the company is a private-label power, it has yet to build consumer clout as a name-brand merchant selling goods it buys rather than makes.

This is not the first time the discount consumer electronics industry has overloaded its circuits. In the recession of 1981-82, nearly half the audio dealers were wiped out, and three of the biggest—Tech Hifi, Schaak Electronics, and Pacific Stereo—were fatally wounded. They too were the victims of their own success. In the Seventies, Japanese audio components were flooding the market, and all those baby-boom kids were going to college and demanding stereos. The combination created cash mountains for once sleepy hobby shops.

"Electronics retailers felt better about themselves than they should have," recalls Sandy Ruby, former chief executive of Tech Hifi. Ruby started the company with John Strohbeen, a fellow MIT student who is now president of Ohm Acoustics Corp., a popular loudspeaker manufacturer. "In the glory days of audio we were modestly successful businessmen buoyed by a tidal wave. It would have been a very unusual person to think he was not touched by some kind of magic." The magic vanished with the recession and the suicidal margins that discount-

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ers accepted so as to maintain sales volume.

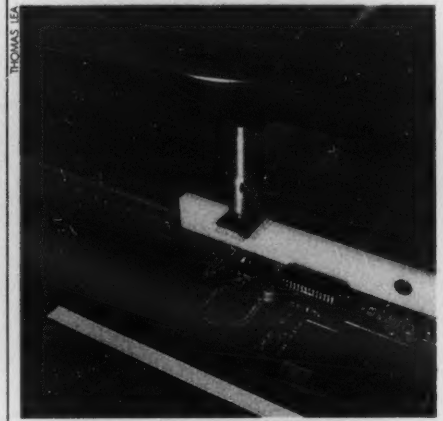
The industry was bailed out the last time by the arrival of the VCR, and to a lesser extent, the microwave oven. Wilfred Schwartz of Federated firmly believes that technology will refloat the industry this time too. The company, which runs some of the more glamorous stores in the business, loaded up on VCRs before they got hot, and prescience paid off. Federated, says its president, Keith Powell, was also early on disk players and camcorders, and now is building its stock of personal computers. Schwartz thinks that such products as personal facsimile and copying machines for the home office may become as common as radios when the price drops. He is praying that will be soon.

BUT THE CROWDED new environment is forcing all the companies to think more about managing and less about merchandising. Mastering such operational aspects of the retailing business as management information systems and warehousing is vital. Family-run chains are hiring MBAs and delegating responsibility to these mercenaries. Says David Mondry of Highland: "When we had our arms around the business, if there was a problem 100 miles away, you got into the car, drove there, and said, 'What's going on here, folks?' Managing the remote locations has been much tougher." Mondry, whose family controls Highland, might not hire himself these days. Neither he nor his brother Eugene, who is president of the chain, has a formal business education. Their sons work for the company, and have advanced degrees to go along with growing up in the business.

As competition in the industry intensifies, there is likely to be more blood on the showroom floor. But the discount audio-video appliance retailers have clearly and permanently staked out a position for themselves as mass marketers. "This is not the catalogue showroom industry," says Schwartz. "This is not a fad." At the beginning of the decade, the combined sales of the top ten name-brand merchants came to less than $1 billion a year; next year there could be a few billion-dollar companies. For investors the electronics dealers offer ample evidence of the astonishing speed at which new forms of retailing develop these days. A huge opportunity for new players opened in consumer electronics, but it existed only for a few years. And unlike a videotape or a compact disk, it cannot be replayed. Where in retailing will the lightning strike next?

COMPANIES TO WATCH

Adept Technology Inc.



THOMAS LEA

An Adept robot builds a circuit board.

■ Like another pair of Stanford University graduates, William Hewlett and David Packard, Brian Carlisle and Bruce Shimano went from the Farm, as the 8,180-acre school is known, to a profitable high-tech start-up, in robots. While almost all robot manufacturers lose money, privately held Adept, founded in 1983, earned about $750,000 on $25 million in sales last year. The company's robot costs about $70,000; it can see, maneuver, and think well enough to build a printed circuit board, decorate men's briefs, or cultivate a virus. "It's a fast, sexy machine," says Prudential-Bache analyst Laura Conigliaro. Small-parts assembly is the fastest-growing segment of the robot market in the U.S., and in just two years Adept has wrapped its mechanical arms around 28% of it. Fanuc, the Japanese company in partnership with General Motors, has but 15%. Conigliaro expects Adept's revenues to reach $35 million in 1987 and anticipates that the company will go public sometime soon.

Ronson Corp.

■ Two years ago the flame almost went out for Ronson. This famed maker of cigarette lighters was delisted by the New York Stock Exchange and exiled to the Nasdaq, where it has since managed a minor turnaround. In the second half of 1986 it booked an operating profit of $581,000 compared with a loss of $1.6 million in the first half. The company boasts a tax loss carry-forward of $19 million to shelter earnings and proprietary technology for the manufacture of neodymium, a rare earth metal used in magnets. Last year Mitsubishi Metals agreed to pay Ronson $700,000 for a nonexclusive license on its neodymium know-how.

Reich & Tang Limited Partnership

■ In May this New York City money management firm sold 25% of itself to the public as a master limited partnership. An MLP pays no federal income taxes because it distributes all its income to the limited partners, much the way a REIT does. Since 1983, Reich & Tang's assets under management have increased 203% and earnings have gone up 274%, to $9.4 million last year. Unfortunately Congress is now talking about plugging the tax loophole that permits MLPs. The Reich & Tang units have already tumbled from their high of $18 to their offering price of $15, where they are yielding 11.7%. One Wall Street security analyst believes the units are undervalued. "Suppose the worst happens and the company has to pay a 34% corporate tax on its earnings," he says. "The yield would still be more than 8%, and that's better than you can get on the average REIT."

Trans-Lux Corp.

■ Trans-Lux assembles electronic signs for brokerages and casinos and sells teleprinters and fax machines. The Norwalk, Connecticut, firm also has $14.7 million that Chairman Richard Brandt received for selling most of Trans-Lux's movie theaters to Paramount last year. That cash is worth $7 a share on a stock that sells for only $13. Some shareholders were angry when Brandt paid himself a $200,000 performance bonus last year, although continuing operations lost $3.5 million on revenues of $20 million. Should the unhappy shareholders succeed in ousting him, "this stock could shoot to more than $20," says a Boston security analyst who has followed the company a long time. On the other hand, Brandt says he would "study" an offer of $30 a share for the company.

—Brett Duval Fromson

THE INTERNATIONAL 500

THE FORTUNE DIRECTORY OF THE BIGGEST INDUSTRIAL CORPORATIONS OUTSIDE THE U.S.

RANKED BY SALES

WITH THE WORLD economy plodding along, the International 500 reported increased revenues and improved profits for the third year in a row. Measured in dollars, sales rose 8%, while earnings stepped up 7%. It took virtually the same number of employees, worldwide, to get those improvements, reflecting a global effort to improve productivity and think thin. Favorable exchange rates spruced up drab balance sheets, sometimes converting declines into advances when marks or florins or yen were converted to dollars. But beyond the pale of currency windfalls, petroleum companies remained mired in a slough of crude, their revenues and profits depressed.

Continuing the steady shift of economic weight to the East, five additional Japanese companies joined the International 500. Japan, now with 152 companies on the list, holds more than twice as many places as its nearest rival, Britain, with 72. Expect even more Japanese firms next year. The fiscal year for most companies there ends at cherry blossom time in late March. So the blooming yen had only one quarter to lift revenue figures. An exuberant franc boosted five more French companies onto the list. But in spite of the soundness of the pound, Britain tallied five fewer 500 companies in 1986.

Breaking with recent tradition, many new inductees turn out decidedly low-tech products. QP Corp., a Japanese food company, makes dip for the chips you munch, not the kind you feed computers. France's Moët-Hennessy gets its kick from champagne. Amcor, the sole Australian newcomer, manufactures packaging and paper products such as tissues.

As with U.S. companies, mergers, acquisitions, and spinoffs produced the greatest changes in the fortunes of the International 500. Free State Consolidated Gold Mines, a yearling from South Africa, took home the trophy for greatest improvement in revenues, thanks to the mergers of four mining operations late in 1985. The new combination quadrupled sales. Schneider, a French construction and industrial equipment giant, fused three companies: Jeumont-Schneider, Merlin Gerin, and Spie Batignolles. When all the figures cooled, revenues had tripled. Recovering from a protracted strike in 1985, British Coal was the show horse in the sales stakes. Revenues climbed 190%. But a British textile manufacturer, Coats Viyella, was only a nip and a tuck behind. Formed when Vantona Viyella acquired Coats Patons, the firm boosted sales 187% from the year before.

The biggest sales decrease in 1986 came from Charbonnages de France, No. 318, a coal producer, which cast its chemical divisions into a new company known as Groupe CdF Chimie. No. 180 this year, the child is already larger than the parent. Türkiye Petrolleri suffered a 55% fall in sales, the worst of all oil companies. Austria's VÖEST-Alpine gave up dabbling in spot oil futures—which cost the previous management its jobs—and has returned to its core business, manufacturing machinery for the steel industry. As a result, revenues slid 48%.

Profit declines played no favorites. Thorn EMI, the British electronics and entertainment giant, reported the greatest decrease in earnings. The company bought semiconductor maker INMOS in 1985, just before the industry lights started to dim. Thorn made $47 million in 1985 and a meager $551,000 in 1986. West Germany's Klöckner-Werke fared only a mite better. The steel giant watched helplessly as earnings, down 98%, nearly disappeared. With so much promise in the worldwide consumer goods businesses—in sales and earnings their performance was the best of all industry groups—the 90% profit drop reported by Japan's Kanebo came as a surprise. Though the company had a good year in soap and cosmetics, its textile operations suffered ripping losses.

SIXTY-THREE of the International 500 companies lost money in 1986, 11 more than in 1985. For the first time since it went public in 1962, Schlumberger reported a loss, the biggest on the list. When half the world's oil drilling rigs stopped spinning, and exploration and deep drilling nearly halted, the oil outfitter was left $2 billion in the hole. Losing money is the usual state of affairs for Dome Petroleum. The Canadian oil company has lost $3 billion over the past five years. Now Amoco Canada is trying to acquire Dome, more charmed by its bargain price than its recent financial performance.

Rover Group, the new name for BL, Britain's government-owned automaker, took $1.3 billion in losses to polish itself for a public offering. It cut employment by 4,000, sold tangential businesses, and dumped its truck subsidiary. Rover's aim is to be as attractive to investors as Jaguar, another nationalized carmaker that shifted into overdrive once it was out of the government lot. But can sensible Rovers be as attractive as sensuous Jags?

— Terence P. Paré and Wilton Woods

RANK		COMPANY	COUNTRY	SALES	NET INCOME		ASSETS		STOCKHOLDERS' EQUITY		EMPLOYEES		INDUSTRY CODE ✓
1986	1985			$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK		RANK	
1	1	**Royal Dutch/Shell Group**	Neth./Britain	**64,843,217**	**3,725,779**	1	**76,462,902**	1	**37,071,395**	1	**138,000**	26	29
2	2	**British Petroleum**	Britain	**39,855,564**	**731,954**	16	**42,065,937**	3	**14,783,490**	5	**126,700**	34	29
3	5	**IRI**[1]	Italy	**31,561,709**	**197,118**	74	**74,682,599**	2	**17,699,776**	2	**471,366**	2	33
4	3	**Toyota Motor**[2]	Japan	**31,553,827**	**1,717,733**	3	**26,545,201**	10	**17,443,803**	3	**82,620**	52	40
5	16	**Daimler-Benz**	W. Germany	**30,168,550**	**831,600**	13	**24,440,195**	12	**5,674,005**	22	**319,965**	5	40
6	7	**Matsushita Electric Industrial**[3]	Japan	**26,459,539**	**946,571**	12	**26,867,705**	9	**13,341,684**	8	**135,881**	[illegible]	36
7	6	**Unilever**	Neth./Britain	**25,141,672**	**973,983**	11	**20,448,122**	18	**5,626,087**	23	**302,000**	6	20
8	15	**Volkswagen**	W. Germany	**24,317,154**	**286,133**	53	**21,193,030**	16	**5,316,053**	25	**281,718**	7	40
9	8	**Hitachi**[4]	Japan	**22,668,085**	**679,609**	18	**29,077,686**	6	**9,812,247**	9	**164,117**	16	36
10	4	**ENI**[1]	Italy	**22,549,921**	**342,275**	45	**32,474,458**	4	**6,845,417**	18	**129,903**	32	29
11	13	**Philips' Gloeilampenfabrieken**	Netherlands	**22,471,263**	**414,418**	34	**23,304,948**	14	**7,299,425**	15	**344,200**	4	36
12	17	**Nestlé**	Switzerland	**21,153,285**[5]	**994,566**[5]	10	**15,548,327**[5]	25	**7,253,408**[5]	16	**162,078**[5]	18	20
13	14	**Siemens**[6]	W. Germany	**20,307,037**	**629,353**	22	**28,774,413**	8	**7,087,383**	17	**363,000**	3	36
14	12	**Nissan Motor**[4]	Japan	**20,141,237**	**158,477**	99	**20,203,958**	19	**7,702,066**	13	**106,282**	40	40
15	22	**Fiat**	Italy	**19,669,581**	**1,449,556**	4	**28,879,014**	7	**7,482,450**	14	**230,293**	8	40
16	19	**Bayer**	W. Germany	**18,768,914**[5]	**619,752**[5]	24	**16,630,387**[5]	23	**5,860,878**[5]	21	**170,000**[5]	13	28
17	20	**BASF**	W. Germany	**18,640,985**[5]	**416,418**[5]	32	**14,991,368**[5]	27	**6,088,424**[5]	20	**131,468**[5]	31	28
18	30	**Renault**[1]	France	**17,661,021**[5]	**(844,233)**[5]	496	**16,057,237**[5]	24	**(1,465,893)**[5]	499	**182,448**[5]	11	40
19	21	**Hoechst**	W. Germany	**17,509,344**[5]	**568,152**[5]	27	**14,297,531**[5]	30	**4,563,816**[5]	29	**181,176**[5]	12	28
20	10	**Elf Aquitaine**[1]	France	**17,287,058**[5]	**617,833**[5]	25	**24,301,866**[5]	13	**7,950,917**[5]	12	**71,350**	63	29
21	23	**Samsung**	South Korea	**16,522,664**	**182,175**	82	**10,900,652**	44	**1,273,522**	142	**147,154**	23	36
22	24	**Mitsubishi Heavy Industries**[4]	Japan	**15,932,973**	**299,241**	50	**20,874,679**	17	**2,659,893**	57	**88,600**	47	40
23	38	**Peugeot**	France	**15,152,869**	**518,350**	29	**11,304,375**	42	**1,652,031**	103	**165,042**	14	40
24	31	**Toshiba**[4]	Japan	**15,036,390**	**268,916**	58	**17,835,923**	22	**3,190,073**	47	**120,000**	36	36
25	27	**Imperial Chemical Industries**	Britain	**14,867,911**	**817,031**	14	**12,876,995**	35	**5,433,362**	24	**121,800**	35	28
26	18	**Petrobrás (Petróleo Brasileiro)**[1]	Brazil	**14,701,534**	**2,073,456**	2	**15,524,884**	26	**8,287,636**	11	**64,319**	76	29
27	28	**Kuwait Petroleum**[1,2]	Kuwait	**13,911,716**	**184,562**	79	**18,872,720**	21	**13,729,409**	6	**15,402**	289	29
28	11	**Total Cie Française des Pétroles**[1]	France	**13,821,041**[5]	**(68,006)**[5]	475	**12,137,212**[5]	40	**3,630,861**[5]	41	**40,253**[5]	119	29
29	37	**Thyssen**[6]	W. Germany	**13,818,174**	**150,463**	105	**8,645,627**	57	**1,598,438**	106	**127,683**	33	33
30	32	**Nippon Oil**[4]	Japan	**13,690,884**	**56,371**	225	**8,424,521**	60	**1,947,320**	85	**10,599**	368	29
31	26	**General Motors of Canada**	Canada	**13,335,100**[7]	**301,085**	48	**3,410,112**	168	**1,761,133**	97	**45,994**	100	40
32	36	**BAT Industries**	Britain	**13,210,379**	**1,273,219**	7	**13,883,612**	31	**6,179,060**	19	**162,580**	17	21
33	33	**Nippon Steel**[4]	Japan	**13,034,715**	**184,174**	80	**21,373,266**	15	**3,856,188**	34	**70,492**	65	33
34	41	**Honda Motor**[8]	Japan	**12,481,447**	**643,578**	20	**9,279,147**	55	**4,217,546**	31	**53,730**	87	40
35	42	**Volvo**	Sweden	**11,795,263**	**414,637**	33	**10,707,907**	46	**2,980,567**	51	**73,147**	60	40
36	48	**CGE (Cie Générale d'Électricité)**[1]	France	**11,681,337**	**167,417**	92	**26,401,505**	11	**1,321,515**	135	**149,010**	20	36
37	43	**Lucky-Goldstar**	South Korea	**11,433,748**	**131,934**	114	**7,247,470**	73	**1,333,168**	134	**64,750**	74	36
38	54	**Saint-Gobain**[1]	France	**11,222,417**[5]	**182,030**[5]	83	**12,223,177**[5]	39	**1,994,189**[5]	80	**147,579**[5]	22	32
39	49	**Daewoo**	South Korea	**11,204,191**	**53,580**	233	**13,067,635**	33	**1,180,498**	147	**91,944**	46	45
40	9	**Pemex (Petróleos Mexicanos)**[1]	Mexico	**11,032,902**[9]	**3,596**[9]	417	**30,915,214**[9]	5	**13,616,567**[9]	7	**155,907**[9]	19	29
41	40	**Canadian Pacific**	Canada	**10,807,709**	**(57,764)**	467	**12,815,862**	37	**4,186,770**	32	**93,800**	44	33
42	47	**NEC**[4]	Japan	**10,562,396**	**122,989**	133	**14,561,695**	28	**2,804,279**	53	**95,796**	43	36
43	45	**Ford Motor of Canada**	Canada	**10,308,776**[7]	**72,717**	197	**2,255,633**	260	**777,247**	209	**27,512**	172	40
44	46	**Idemitsu Kosan**[4]	Japan	**10,255,663**[9]	**3,343**[9]	418	**8,568,750**[9]	59	**225,918**[9]	425	**5,858**[9]	443	29
45	58	**Robert Bosch**	W. Germany	**10,003,662**	**176,770**	86	**8,320,861**	61	**2,257,226**	71	**148,888**	21	40
46	62	**Mazda Motor**[10]	Japan	**9,678,888**	**83,567**	174	**6,249,896**	88	**1,913,953**	88	**30,603**	155	40
47	53	**Ruhrkohle**	W. Germany	**9,637,210**	**25,331**	339	**9,317,942**	54	**576,350**	261	**132,570**	29	10
48	52	**Mitsubishi Electric**[4]	Japan	**9,401,584**	**120,985**	135	**10,321,047**	48	**2,609,510**	58	**71,479**	62	36
49	34	**Petróleos de Venezuela**[1]	Venezuela	**9,249,726**	**1,196,262**	8	**18,971,739**	20	**16,596,548**	4	**44,674**	105	29
50	61	**Thomson**[1]	France	**9,045,864**	**127,350**	122	**12,591,501**	38	**882,547**	187	**105,000**	41	36

The definitions and concepts underlying the figures in this directory are explained on page 238. ✓ Industry code definitions appear on page 238. Footnotes appear on page 238.

THE INTERNATIONAL 500 RANKED BY SALES

RANK		COMPANY	COUNTRY	SALES	NET INCOME		ASSETS		STOCKHOLDERS' EQUITY		EMPLOYEES		INDUSTRY CODE ✓
1986	1985			$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK		RANK	
51	55	**Ciba-Geigy**	Switzerland	**8,869,925**	**645,439**	19	**13,815,366**	32	**8,922,553**	10	**82,231**	54	28
52	56	**Montedison**	Italy	**8,604,813**	**214,550**	69	**13,023,898**	34	**2,414,488**	63	**66,649**	72	28
53	51	**Indian Oil**[1,4]	India	**8,076,784**	**105,860**	148	**2,999,301**	195	**764,138**	215	**31,998**	148	29
54	74	**Mannesmann**	W. Germany	**7,938,097**[5]	**36,156**[5]	291	**6,077,782**[5]	93	**1,590,194**[5]	107	**108,556**[5]	39	45
55	44	**Petrofina**	Belgium	**7,847,250**	**410,489**	35	**8,230,042**	63	**2,462,112**	62	**22,200**	220	29
56	83	**Brown Boveri**	Switzerland	**7,686,342**	**44,475**	260	**10,011,152**	49	**2,602,850**	59	**97,500**	42	36
57	100	**Ford-Werke**	W. Germany	**7,683,589**[7]	**270,448**	57	**3,491,391**	164	**557,733**	264	**46,311**	98	40
58	68	**Fujitsu**[4]	Japan	**7,654,080**	**173,918**	88	**10,539,026**	47	**3,582,990**	44	**84,277**	51	44
59	72	**Rhône-Poulenc**[1]	France	**7,608,344**[5]	**289,930**[5]	51	**2,571,742**[5]	228	**2,116,983**[5]	77	**84,600**[5]	50	28
60	108	**Electrolux**	Sweden	**7,446,908**	**285,168**	54	**7,164,367**	74	**1,469,218**	120	**141,753**	25	36
61	80	**Sony**[10]	Japan	**7,432,628**	**238,907**	65	**8,874,816**	56	**3,711,089**	38	**48,671**	95	36
62	193	**British Coal**[1,11]	Britain	**7,352,956**	**(68,848)**	476	**9,446,608**	52	**(53,046)**	495	**199,600**	10	10
63	101	**Norsk Hydro**[1]	Norway	**7,331,609**	**(50,544)**	463	**8,230,373**	62	**N.A.**		**43,122**	108	28
64	71	**Fried. Krupp**	W. Germany	**7,299,059**	**36,270**	290	**5,634,278**	102	**1,040,549**	162	**68,043**	68	33
65	64	**General Electric**[4]	Britain	**7,233,160**	**623,624**	23	**7,590,146**	70	**3,851,287**	35	**164,536**	15	36
66	57	**DSM**[1]	Netherlands	**7,231,699**[5]	**168,217**[5]	91	**4,616,801**[5]	130	**1,371,231**[5]	128	**27,315**[5]	177	28
67	97	**BMW (Bayerische Motoren Werke)**	W. Germany	**7,166,269**	**159,677**	97	**4,709,828**	123	**1,374,589**	125	**50,719**	89	40
68	29	**VÖEST-Alpine**	Austria	**7,079,471**	**(3,773)**	440	**6,775,774**	82	**359,248**	359	**65,100**	73	33
69	110	**Dalgety**[2]	Britain	**7,072,281**	**14,836**	385	**1,748,012**	321	**453,472**	310	**20,098**	234	20
70	73	**Sanyo Electric**[12]	Japan	**6,916,814**	**12,246**	399	**7,068,534**	77	**2,555,211**	60	**25,599**	193	36
71	96	**Adam Opel**	W. Germany	**6,834,236**[7]	**(65,189)**	472	**3,767,282**	153	**794,276**	202	**55,438**	86	40
72	76	**Grand Metropolitan**[6]	Britain	**6,757,909**	**384,526**	36	**6,107,232**	92	**2,959,429**	52	**131,493**	30	49
73	91	**Michelin**	France	**6,689,030**	**274,590**	55	**8,132,416**	65	**1,500,862**	116	**119,300**	37	30
74	78	**Statoil**[1]	Norway	**6,647,776**	**154,741**	101	**6,835,390**	81	**707,390**	223	**8,471**	393	29
75	107	**ASEA**	Sweden	**6,456,746**	**247,576**	62	**7,859,813**	69	**1,429,907**	123	**63,124**	78	45
76	90	**Ford Motor**	Britain	**6,415,967**[7]	**115,881**	139	**5,639,430**	101	**1,543,282**	111	**49,000**	93	40
77	86	**Akzo Group**	Netherlands	**6,375,425**	**343,579**	44	**5,260,345**	109	**1,984,442**	81	**68,400**	67	28
78	109	**Isuzu Motors**[10]	Japan	**6,325,777**	**(67,689)**	474	**4,988,782**	114	**539,810**	271	**25,608**	191	40
79	60	**Showa Shell Sekiyu**	Japan	**6,168,625**[9]	**29,181**[9]	326	**4,318,282**[9]	139	**308,579**[9]	388	**2,832**[9]	487	29
80	87	**Sacilor**[1]	France	**6,154,075**[5]	**(1,069,910)**[5]	497	**7,349,381**[5]	72	**357,221**[5]	362	**55,573**[5]	85	33
81	70	**Nippon Kokan**[4]	Japan	**6,086,493**	**30,248**	319	**14,407,506**	29	**1,459,623**	122	**38,106**	124	33
82	67	**Sunkyong**	South Korea	**6,005,876**	**69,507**	206	**2,883,300**	202	**534,253**	273	**19,540**	238	29
83	79	**Barlow Rand**[6]	South Africa	**5,944,771**	**150,697**	104	**4,559,666**	132	**885,438**	186	**143,959**	24	20
84	84	**Broken Hill Proprietary**[13]	Australia	**5,937,725**	**707,301**	17	**11,829,233**	41	**4,700,137**	28	**61,000**	80	33
85	95	**BTR**	Britain	**5,895,531**	**630,889**	21	**4,745,779**	122	**1,854,756**	92	**79,400**	55	45
86	128	**Nippondenso**	Japan	**5,879,785**	**191,426**	76	**5,437,701**	106	**2,783,588**	54	**42,967**	109	40
87	81	**Alcan Aluminium**	Canada	**5,756,000**	**244,000**	63	**7,118,000**	75	**3,116,000**	49	**64,500**	75	33
88	65	**Veba Oel**	W. Germany	**5,711,567**	**107,449**	144	**2,582,593**	226	**715,487**	222	**16,782**	273	29
89	98	**Kawasaki Steel**[4]	Japan	**5,585,393**[9]	**83,095**[9]	176	**11,011,852**[9]	43	**1,916,143**[9]	87	**33,212**[9]	136	33
90	88	**Kobe Steel**[4]	Japan	**5,583,004**	**29,217**	325	**10,733,074**	45	**863,176**	189	**31,486**	150	33
91	111	**IBM Deutschland**	W. Germany	**5,537,978**[7]	**238,437**	66	**4,274,460**	142	**1,039,771**	163	**28,546**	165	44
92	89	**Sumitomo Metal Industries**[4]	Japan	**5,459,793**	**82,869**	177	**12,821,413**	36	**1,869,910**	90	**33,670**	133	33
93	106	**Sharp**[4]	Japan	**5,370,672**	**161,761**	95	**6,941,143**	78	**2,136,661**	74	**28,873**	161	36
94	154	**Hanson Trust**[6]	Britain	**5,339,905**	**535,899**	28	**9,642,922**	51	**2,297,518**	70	**92,000**	45	20
95	93	**Mitsubishi Chemical Industries**[14]	Japan	**5,306,188**	**32,145**	308	**5,929,631**	95	**685,585**	232	**18,400**	252	28
96	92	**Chrysler Canada**	Canada	**5,295,095**[7]	**139,089**	111	**1,490,514**	360	**502,896**	285	**12,093**	346	40
97	118	**IBM France**	France	**5,288,329**[7]	**356,925**	41	**3,810,726**	152	**1,576,133**	109	**22,225**	218	44
98	125	**Canon**	Japan	**5,277,304**	**63,668**	214	**6,377,157**	83	**2,125,433**	76	**35,498**	128	44
99	66	**Esso (Germany)**	W. Germany	**5,233,831**[7]	**141,224**	110	**2,327,261**	249	**677,671**	235	**3,231**	484	29
100	130	**IBM Japan**	Japan	**5,213,933**[7,9]	**379,428**[9]	38	**3,656,229**[9]	158	**1,639,255**[9]	105	**18,822**[9]	245	44

The definitions and concepts underlying the figures in this directory are explained on page 238. ✓ Industry code definitions appear on page 238. Footnotes appear on page 238.

THE INTERNATIONAL 500 RANKED BY SALES

RANK		COMPANY	COUNTRY	SALES	NET INCOME		ASSETS		STOCKHOLDERS' EQUITY		EMPLOYEES		INDUSTRY CODE ✓
1986	1985			$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK		RANK	
101	50	**Esso UK**	Britain	**5,201,715**[7]	**772,586**	15	**6,336,205**	84	**1,299,856**	138	**5,352**	454	29
102	105	**British Steel**[1,4]	Britain	**5,142,938**	**52,324**	238	**5,997,145**	94	**4,441,129**	30	**67,100**	71	33
103	75	**Schlumberger**	Neth. Antilles	**5,056,183**	**(2,017,591)**	500	**8,011,779**	67	**4,123,271**	33	**49,661**	92	38
104	85	**Chinese Petroleum**[1]	Taiwan	**5,049,625**	**1,282,981**	6	**5,514,031**	104	**3,844,717**	36	**22,491**	215	29
105	69	**Imperial Oil**	Canada	**5,010,944**	**205,072**	71	**6,262,129**	87	**3,685,735**	40	**12,516**	339	29
106	126	**Pechiney**[1]	France	**5,005,474**	**(65,119)**	471	**6,270,974**	86	**1,303,748**	137	**49,900**	91	33
107	112	**Rover Group**[1,15]	Britain	**5,004,865**	**(1,308,570)**	498	**2,753,447**	209	**(463,429)**	498	**73,396**	59	40
108	•	**Japan Tobacco**[4]	Japan	**4,979,812**	**151,242**	102	**9,975,180**	50	**5,106,143**	27	**32,000**	147	21
109	82	**Neste**[1]	Finland	**4,973,007**	**(91,380)**	484	**4,256,126**	143	**1,826,840**	95	**10,405**	374	29
110	145	**Asahi Glass**	Japan	**4,964,120**	**170,002**	90	**5,198,743**	110	**2,074,498**	79	**17,452**	266	28
111	113	**MAN**[2,16]	W. Germany	**4,940,612**	**49,044**	244	**5,797,440**	97	**938,182**	179	**56,138**	84	45
112	135	**Saab-Scania**	Sweden	**4,940,547**	**183,111**	81	**4,667,465**	127	**840,781**	196	**48,980**	94	40
113	77	**Maruzen Oil**[4]	Japan	**4,920,180**	**(57,298)**	466	**2,605,963**	222	**(229,398)**	496	**4,176**	468	29
114	158	**Olivetti**	Italy	**4,905,763**	**379,151**	39	**7,481,777**	71	**2,355,265**	67	**59,091**	82	44
115	59	**Rio Tinto-Zinc**	Britain	**4,904,973**	**354,536**	42	**6,278,536**	85	**2,397,202**	65	**82,551**	53	10
116	133	**Aérospatiale**[1]	France	**4,886,768**	**43,740**	263	**8,599,796**	58	**529,514**	276	**42,920**	111	41
117	94	**Nippon Mining**[4]	Japan	**4,886,506**	**24,145**	345	**4,640,957**	129	**501,109**	286	**8,263**	400	29
118	123	**Usinor**[1]	France	**4,860,076**	**(717,460)**	495	**5,768,073**	98	**474,361**	301	**39,739**	121	33
119	162	**BSN**	France	**4,854,734**	**156,083**	100	**4,400,345**	137	**1,367,101**	129	**42,780**	112	20
120	134	**Solvay**	Belgium	**4,841,717**[5]	**190,367**[5]	77	**4,544,469**[5]	133	**1,509,039**[5]	114	**44,787**[5]	104	28
121	104	**Taiyo Fishery**[14]	Japan	**4,716,923**	**72,159**	200	**2,408,144**	243	**167,478**	449	**9,383**	385	20
122	140	**Pirelli**	Switz./Italy	**4,714,000**	**127,000**	123	**4,879,678**	116	**1,736,204**	98	**68,000**	69	30
123	142	**Bridgestone**	Japan	**4,704,545**	**123,544**	132	**4,763,095**	121	**1,962,735**	83	**33,425**	135	30
124	131	**Degussa**[6]	W. Germany	**4,695,101**	**49,697**	242	**2,255,762**	259	**506,060**	284	**24,977**	198	33
125	152	**Komatsu**	Japan	**4,680,913**	**86,683**	170	**6,214,037**	90	**2,412,944**	64	**22,951**	213	45
126	144	**Sandoz**	Switzerland	**4,648,163**	**300,760**	49	**5,272,615**	108	**2,985,130**	50	**42,627**	114	42
127	121	**Asahi Chemical Industry**[4]	Japan	**4,621,757**	**86,995**	166	**4,919,448**	115	**1,288,452**	140	**21,963**	223	22
128	146	**British Aerospace**	Britain	**4,601,483**	**123,655**	131	**4,858,301**	117	**1,809,391**	96	**75,480**	57	41
129	124	**Thorn EMI**[4]	Britain	**4,566,681**	**551**	426	**3,009,771**	193	**855,809**	190	**85,700**	49	36
130	127	**IBM United Kingdom Holdings**	Britain	**4,514,940**[7]	**384,313**	37	**2,721,870**	211	**1,128,182**	153	**18,801**	246	44
131	132	**L.M. Ericsson Telephone**	Sweden	**4,438,688**	**91,736**	162	**5,078,178**	112	**1,276,517**	141	**72,575**	61	36
132	155	**Feldmühle Nobel**	W. Germany	**4,429,623**	**62,961**	216	**3,298,062**	176	**954,073**	178	**42,935**	110	26
133	117	**Northern Telecom**	Canada	**4,383,600**	**286,600**	52	**3,961,100**	146	**1,968,200**	82	**46,202**	99	36
134	119	**Sumitomo Chemical**	Japan	**4,359,100**	**44,920**	257	**5,339,160**	107	**887,113**	185	**12,366**	344	28
135	141	**Roche/Sapac**	Switzerland	**4,348,737**	**231,213**	67	**7,963,321**	68	**5,155,514**	26	**46,513**	97	42
136	129	**Ishikawajima-Harima Heavy Ind.**[4]	Japan	**4,298,113**	**20,494**	358	**8,104,488**	66	**791,633**	203	**38,000**	125	45
137	139	**Metallgesellschaft**[6]	W. Germany	**4,210,993**	**27,777**	329	**2,597,815**	223	**442,330**	320	**21,598**	225	33
138	103	**YPF (Yacimientos Petróliferos)**[1]	Argentina	**4,208,373**	**(213,848)**	488	**9,346,224**	53	**3,685,851**	39	**32,487**	141	29
139	173	**Fuji Photo Film**[17]	Japan	**4,166,536**	**350,905**	43	**6,126,805**	91	**3,593,809**	43	**17,180**	270	28
140	116	**Mitsubishi Oil**[4]	Japan	**4,121,219**	**76,698**	188	**3,659,916**	157	**98,446**	471	**3,093**	486	29
141	115	**Daikyo Oil**[4]	Japan	**4,109,632**	**3,185**	419	**1,588,986**	352	**68,007**	476	**3,509**	478	29
142	102	**Toa Nenryo Kogyo**	Japan	**4,101,257**	**253,095**	60	**4,219,280**	144	**1,888,067**	89	**3,770**	475	29
143	163	**Henkel**	W. Germany	**4,014,403**	**97,838**	156	**3,289,480**	177	**1,374,099**	126	**32,038**	145	28
144	151	**Snow Brand Milk Products**[4]	Japan	**3,839,744**	**13,781**	390	**1,950,456**	297	**290,495**	401	**13,865**	317	20
145	170	**Dai Nippon Printing**[13]	Japan	**3,827,292**	**124,415**	130	**3,372,304**	172	**1,859,083**	91	**13,824**	319	27
146	168	**Salzgitter**[1,6]	W. Germany	**3,731,040**	**25,054**	341	**3,904,383**	148	**657,141**	242	**38,906**	123	33
147	122	**Preussag**	W. Germany	**3,725,528**	**17,090**	370	**2,513,315**	234	**473,668**	302	**27,402**	175	33
148	•	**Schneider**	France	**3,718,117**	**45,381**	255	**7,098,902**	76	**405,802**	332	**59,600**	81	45
149	149	**Kawasaki Heavy Industries**[4]	Japan	**3,714,619**	**(6,157)**	445	**5,483,880**	105	**481,886**	297	**24,703**	202	45
150	169	**Cockerill Sambre**[1]	Belgium	**3,700,837**	**(90,167)**	481	**3,743,355**	155	**625,740**	251	**28,849**	162	33

The definitions and concepts underlying the figures in this directory are explained on page 238. ✓ Industry code definitions appear on page 238. Footnotes appear on page 238.

THE INTERNATIONAL 500 RANKED BY SALES

RANK 1986	RANK 1985	COMPANY	COUNTRY	SALES $ THOUSANDS	NET INCOME $ THOUSANDS	NET INCOME RANK	ASSETS $ THOUSANDS	ASSETS RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	STOCKHOLDERS' EQUITY RANK	EMPLOYEES	EMPLOYEES RANK	INDUSTRY CODE ✓
151	137	**Ssangyong**	South Korea	3,700,484	30,804	314	3,759,567	154	688,463	229	16,370	277	29
152	150	**Allied-Lyons**[8]	Britain	3,665,828	265,100	59	4,442,112	136	2,699,827	55	70,301	66	49
153	185	**Suzuki Motor**[4]	Japan	3,648,974	44,771	258	2,680,253	216	575,648	262	20,104	233	40
154	174	**Koç Holding**	Turkey	3,647,087	125,645	127	1,194,551	408	183,415	443	31,002	153	40
155	176	**Beecham Group**[4]	Britain	3,583,809	240,279	64	3,569,848	162	1,726,353	99	42,300	116	42
156	199	**Matsushita Electric Works**[12]	Japan	3,561,953	86,984	167	3,052,632	190	1,348,164	131	16,444	276	36
157	157	**Toray Industries**[4]	Japan	3,560,310	45,178	256	4,535,918	134	1,236,441	144	28,270	168	28
158	184	**Toppan Printing**[13]	Japan	3,553,046	85,482	173	2,966,304	198	1,337,410	133	14,274	308	27
159	187	**Fuji Heavy Industries**[4]	Japan	3,457,154	86,963	168	2,767,652	208	934,178	180	15,320	293	40
160	153	**Oil & Natural Gas Commission**[1,4]	India	3,451,801[9]	1,066,043[9]	9	8,138,071[9]	64	3,630,528[9]	42	43,940[9]	107	29
161	172	**EFIM**[1]	Italy	3,418,727	(144,151)	486	N.A.		N.A.		39,000	122	33
162	192	**Hoesch**	W. Germany	3,395,326	124,572	129	3,347,897	174	845,729	193	32,400	142	33
163	136	**Petro-Canada**[1]	Canada	3,366,054	130,958	115	5,893,555	96	2,687,183	56	7,740	409	29
164	120	**Dow Chemical Europe**	Switzerland	3,357,000	N.A.		3,396,000	169	N.A.		12,500	341	28
165	175	**Haci Ömer Sabanci Holding**	Turkey	3,215,465	124,814	128	3,205,043	181	260,617	408	27,856	169	22
166	180	**Sumitomo Electric Industries**[4]	Japan	3,215,022	60,841	219	3,668,283	156	1,081,306	160	23,600	209	34
167	183	**BICC**	Britain	3,143,442	46,939	249	1,722,665	327	429,925	325	45,593	102	45
168	156	**ALUSUISSE (Swiss Aluminium)**	Switzerland	3,140,471	(381,927)	493	3,608,426	159	554,523	266	24,007	205	33
169	182	**Imasco**[4]	Canada	3,127,493	189,897	78	2,137,898	271	1,085,963	159	85,928	48	21
170	224	**Bass**[6]	Britain	3,057,268	207,459	70	3,490,550	165	2,084,260	78	76,922	56	49
171	202	**Bertelsmann**[2]	W. Germany	3,033,574	71,332	202	2,082,398	277	390,791	341	31,593	149	27
172	178	**GKN**[18]	Britain	3,020,814	46,792	250	2,475,330	239	956,361	176	44,914	103	40
173	190	**Kubota**[19]	Japan	3,012,031	35,074	295	3,885,835	149	1,491,215	118	18,000	257	45
174	220	**Gulf Canada**	Canada	3,008,437	225,939	68	4,823,316	119	1,531,499	112	1,903	493	26
175	63	**Türkiye Petrolleri**[1]	Turkey	2,994,919	488,783	30	3,264,884	178	1,372,853	127	18,527	251	29
176	186	**Courtaulds**[4]	Britain	2,991,717	143,479	108	2,053,028	284	837,832	198	67,700	70	22
177	99	**EMP**[1,20]	Spain	2,988,411	43,537	264	1,888,525	301	777,749	207	5,637	446	29
178	225	**L'Air Liquide**	France	2,979,941	179,887	84	4,814,678	120	1,711,343	100	26,000	186	28
179	442	**Guinness**[6]	Britain	2,978,472	130,671	116	4,391,038	138	1,293,439	139	18,616	249	49
180	•	**Groupe CdF Chimie**	France	2,976,255	(374,396)	492	N.A.		486,122	295	17,850	260	28
181	181	**Korea Explosives**	South Korea	2,951,781	34,426	296	2,476,185	238	482,064	296	17,832	261	28
182	179	**Steel Authority of India**[1,4]	India	2,946,815[9]	130,167[9]	117	6,855,141[9]	80	3,116,187[9]	48	207,839[9]	9	33
183	257	**Showa Denko**	Japan	2,918,314	91,218	163	4,650,019	128	233,645	422	9,145	387	28
184	230	**Jacobs Suchard**	Switzerland	2,910,650	106,104	146	2,325,021	250	898,601	184	10,063	380	20
185	197	**Furukawa Electric**[4]	Japan	2,882,886	24,195	344	3,334,865	175	449,662	315	14,207	310	33
186	•	**Hyundai Heavy Industries**	South Korea	2,855,680	2,564	421	2,859,103	204	637,414	249	50,300	90	37
187	209	**BOC Group**[6]	Britain	2,855,095	(21,876)	454	3,454,524	167	1,491,506	117	37,466	127	28
188	223	**Daihatsu Motor**[2]	Japan	2,854,591	26,656	337	2,091,697	276	520,281	278	17,500	264	40
189	191	**STC**	Britain	2,835,992	151,231	103	1,756,466	319	803,960	201	37,819	126	36
190	198	**United Biscuits (Holdings)**	Britain	2,834,672	111,187	140	1,603,175	345	671,424	237	39,952	120	20
191	213	**Rank Xerox**[10]	Britain	2,828,212	101,044	154	2,894,346	201	1,460,314	121	30,420	156	44
192	215	**SKF**	Sweden	2,800,761	82,058	179	3,374,870	171	1,337,784	132	45,863	101	34
193	196	**Saarbergwerke**[1]	W. Germany	2,772,480[5]	(77,096)[5]	477	2,503,085[5]	237	302,509[5]	397	29,774[5]	159	29
194	205	**Hyosung**	South Korea	2,700,210	33,947	299	2,258,188	258	399,510	338	24,000	206	22
195	200	**Cadbury Schweppes**	Britain	2,698,843	149,618	106	1,895,821	300	686,694	231	27,730	171	20
196	228	**Tokyo Sanyo Electric**[12]	Japan	2,690,103	(8,354)	446	3,057,809	188	1,125,980	156	19,048	242	36
197	221	**Ricoh**[4]	Japan	2,684,008	69,925	205	2,931,205	200	1,161,633	150	26,500	183	44
198	260	**News Corp.**[2]	Australia	2,676,938	172,114	89	5,697,795	100	2,521,243	61	22,800	214	27
199	189	**Reed International**[4]	Britain	2,659,044	109,330	143	1,862,504	303	928,894	181	34,700	130	27
200	208	**Ube Industries**[4]	Japan	2,655,823	6,709	413	4,709,673	124	202,061	435	15,094	297	32

The definitions and concepts underlying the figures in this directory are explained on page 238. ✓ Industry code definitions appear on page 238. Footnotes appear on page 238.

THE INTERNATIONAL 500 RANKED BY SALES

RANK		COMPANY	COUNTRY	SALES	NET INCOME		ASSETS		STOCKHOLDERS' EQUITY		EMPLOYEES		INDUSTRY CODE ✓
1986	1985			$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK		RANK	
201	203	**Teijin**[4]	Japan	**2,653,493**	**77,947**	186	**3,037,325**	191	**917,365**	183	**11,086**	360	28
202	201	**Unigate**[4]	Britain	**2,643,484**	**75,733**	191	**1,219,911**	405	**492,444**	291	**33,500**	134	20
203	240	**Rolls-Royce**[1]	Britain	**2,643,249**	**176,021**	87	**1,993,962**	293	**766,452**	212	**41,900**	117	41
204	249	**VIAG**[1]	W. Germany	**2,638,591**	**59,577**	221	**3,140,373**	184	**840,703**	197	**21,964**	222	33
205	167	**Ultramar**	Britain	**2,624,327**	**(91,091)**	483	**2,588,593**	225	**985,714**	173	**4,116**	470	29
206	273	**L'Oréal**	France	**2,617,716**	**135,142**	113	**2,548,624**	230	**1,177,369**	148	**27,000**	181	43
207	171	**ÖMV**	Austria	**2,616,779**[9]	**19,676**[9]	360	**2,187,465**[9]	265	**843,096**[9]	194	**6,803**[9]	427	29
208	213	**Mitsubishi Metal**[4]	Japan	**2,605,523**	**24,240**	343	**3,239,482**	179	**242,061**	420	**10,100**	379	33
209	272	**De Beers Consolidated Mines**	South Africa	**2,599,561**[21]	**483,844**[21]	31	**4,682,185**[21]	125	**3,780,587**[21]	37	**20,000**	235	10
210	143	**Mobil Oil (Germany)**	W. Germany	**2,584,523**[7,9]	**105,940**[9]	147	**1,454,728**[9]	367	**363,920**[9]	354	**1,867**[9]	494	29
211	177	**General Sekiyu**[4]	Japan	**2,577,849**[9]	**55,425**[9]	227	**2,095,586**[9]	275	**439,707**[9]	321	**1,829**[9]	495	29
212	279	**Bull**[1]	France	**2,569,533**	**39,133**	278	**2,608,109**	221	**549,834**	269	**26,804**	182	44
213	217	**Toyo Seikan**[4]	Japan	**2,560,897**	**85,710**	172	**2,305,101**	252	**925,980**	182	**16,296**	278	34
214	195	**Noranda**	Canada	**2,544,701**	**31,190**	311	**4,307,634**	140	**1,934,086**	86	**42,600**	115	33
215	207	**Pohang Iron & Steel**	South Korea	**2,534,087**	**70,101**	204	**5,177,447**	111	**1,827,043**	94	**19,117**	241	33
216	268	**Sulzer Brothers**	Switzerland	**2,528,387**	**36,803**	287	**4,302,354**	141	**1,853,779**	93	**31,218**	151	45
217	160	**CEPSA (Española de Petróleos)**	Spain	**2,523,159**	**74,887**	193	**1,258,140**	395	**558,476**	263	**3,778**[9]	473	29
218	246	**Tarmac**	Britain	**2,520,475**	**162,233**	94	**1,784,930**	316	**728,649**	220	**25,116**	197	32
219	●	**Coats Viyella**[22]	Britain	**2,508,887**	**158,639**	98	**2,033,842**	286	**957,398**	175	**70,723**	64	22
220	216	**International Thomson Org.**	Canada	**2,508,300**	**142,284**	109	**2,718,905**	212	**1,022,925**	167	**20,700**	231	27
221	342	**Hillsdown Holdings**	Britain	**2,497,445**	**76,129**	190	**1,291,702**	391	**521,840**	277	**27,481**	173	20
222	222	**Takeda Chemical**[4]	Japan	**2,496,405**	**104,458**	150	**3,872,264**	150	**1,957,196**	84	**13,314**	326	42
223	232	**Kanebo**[23]	Japan	**2,492,158**	**1,766**	424	**3,085,615**	186	**71,325**	475	**23,126**	212	22
224	219	**Hoogovens Groep**	Netherlands	**2,487,815**	**63,122**	215	**3,365,109**	173	**651,001**	243	**27,461**	174	33
225	210	**Kirin Brewery**[14]	Japan	**2,477,058**	**136,163**	112	**3,593,677**	160	**1,410,083**	124	**10,485**	372	49
226	229	**Oji Paper**[4]	Japan	**2,472,780**	**79,340**	184	**2,992,325**	196	**780,180**	206	**5,534**	450	26
227	237	**Nissan Shatai**[4]	Japan	**2,471,966**[9]	**15,930**[9]	377	**903,615**[9]	445	**309,144**[9]	386	**6,968**[9]	425	40
228	188	**Conoco**	Britain	**2,452,560**	**102,386**	152	**1,081,039**	423	**682,246**	233	**1,460**	498	29
229	253	**Lafarge Coppée**	France	**2,439,634**	**166,842**	93	**3,190,347**	182	**1,007,283**	170	**17,927**	259	32
230	211	**CSR**[4]	Australia	**2,435,303**	**(54,799)**	465	**2,655,831**	218	**1,126,865**	155	**13,512**	323	20
231	204	**Mobil Oil Italiana**	Italy	**2,431,535**[9]	**(5,991)**[9]	444	**639,494**[9]	482	**24,645**[9]	482	**2,002**[9]	492	29
232	295	**Standard Elektrik Lorenz**	W. Germany	**2,429,672**	**43,297**	267	**1,374,058**	380	**347,803**	366	**32,496**	140	36
233	248	**Tate & Lyle**[6]	Britain	**2,415,657**	**39,348**	277	**1,179,865**	409	**439,538**	322	**12,515**	340	20
234	285	**RMC Group**	Britain	**2,396,086**	**85,957**	171	**1,541,800**	353	**515,762**	281	**19,316**	239	32
235	165	**Esso Italiana**	Italy	**2,391,552**[9]	**52,942**[9]	234	**N.A.**		**67,214**[9]	477	**2,371**[9]	489	29
236	226	**Nippon Suisan**[4]	Japan	**2,390,653**	**9,573**	406	**1,497,624**	359	**347,889**	365	**6,040**	439	20
237	238	**Fuji Electric**[4]	Japan	**2,380,935**	**23,385**	348	**3,060,709**	187	**455,861**	308	**18,556**	250	36
238	235	**Yamaha Motor**[23]	Japan	**2,371,674**	**37,821**	283	**2,033,658**	287	**149,153**	458	**13,929**	316	40
239	252	**Oerlikon-Bührle**	Switzerland	**2,365,610**	**(50,590)**	464	**5,062,825**	113	**2,126,022**	75	**32,951**	137	34
240	283	**Nokia**	Finland	**2,363,989**	**104,661**	149	**2,723,386**	210	**1,031,224**	165	**28,500**	166	36
241	243	**Hawker Siddeley Group**	Britain	**2,358,682**	**95,785**	158	**2,403,281**	244	**1,127,441**	154	**40,500**	118	45
242	269	**Lucas Industries**[24]	Britain	**2,349,284**	**29,453**	324	**1,812,471**	311	**752,760**	216	**64,087**	77	40
243	236	**Ajinomoto**[4]	Japan	**2,330,219**	**67,319**	209	**2,771,357**	207	**1,186,605**	146	**10,177**	377	20
244	164	**Deutsche Texaco**	W. Germany	**2,318,269**[7]	**80,828**	181	**1,513,201**	356	**379,117**	346	**3,854**	471	29
245	315	**Heineken**	Netherlands	**2,297,028**	**116,505**	138	**2,660,948**	217	**1,034,758**	164	**28,749**	163	49
246	159	**Esso (France)**	France	**2,293,510**[7]	**44,040**	262	**1,262,049**	394	**535,962**	272	**3,246**	483	29
247	274	**John Labatt**[23]	Canada	**2,290,424**	**73,515**	196	**1,299,499**	390	**492,078**	292	**14,200**	311	20
248	300	**Continental Gummi-Werke**	W. Germany	**2,288,534**	**52,645**	236	**1,642,625**	340	**377,738**	347	**32,012**	146	30
249	214	**Canada Packers**[4]	Canada	**2,255,336**	**27,610**	330	**445,875**	494	**246,732**	415	**13,200**	327	20
250	231	**Avions Marcel Dassault-Breguet**	France	**2,252,831**	**42,369**	271	**5,570,498**	103	**514,830**	282	**15,783**	283	41

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THE INTERNATIONAL 500 RANKED BY SALES

RANK 1986	RANK 1985	COMPANY	COUNTRY	SALES $ THOUSANDS	NET INCOME $ THOUSANDS	NET INCOME RANK	ASSETS $ THOUSANDS	ASSETS RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	STOCKHOLDERS' EQUITY RANK	EMPLOYEES	EMPLOYEES RANK	INDUSTRY CODE ✓
251	287	**TDK**[12]	Japan	2,244,928	89,637	165	2,507,837	235	1,566,998	110	16,182	280	36
252	239	**Toyobo**[23]	Japan	2,238,099	27,003	334	2,346,593	248	361,319	355	15,611	286	28
253	266	**Gallaher**	Britain	2,229,160	106,493	145	1,887,815	302	777,571	208	30,328	157	21
254	318	**SNECMA**[1]	France	2,223,822	(9,674)	448	4,071,930	145	371,946	351	25,892	187	41
255	303	**Deutsche Babcock**[6]	W. Germany	2,218,204	16,755	374	1,735,272	322	248,983	414	21,591	226	34
256	255	**Mitsui Toatsu Chemicals**[4]	Japan	2,214,813	21,463	355	3,008,626	194	163,468	452	11,078	361	28
257	336	**Yamazaki Baking**	Japan	2,199,814	54,208	231	1,393,455	375	715,951	221	13,648	321	20
258	247	**Vauxhall Motors**	Britain	2,199,090[7]	(90,504)	482	998,760	434	N.A.		12,638	336	40
259	227	**Fletcher Challenge**[2]	New Zealand	2,179,537	130,092	118	2,303,095	253	705,703	224	22,300	217	32
260	242	**Coal India**[1,4]	India	2,179,304	(330,878)	491	4,680,934	126	2,363,768	66	671,309	1	10
261	•	**Hyundai Motor**	South Korea	2,155,162	43,334	266	1,469,043	364	306,021	391	27,300	178	40
262	254	**Koor Industries**	Israel	2,155,000[21]	N.A.		N.A.		N.A.		32,700[21]	138	36
263	290	**Schering**	W. Germany	2,147,128	66,555	210	2,521,355	233	967,862	174	23,880	207	42
264	341	**Svenska Cellulosa**	Sweden	2,146,544	119,510	136	867,824	451	490,877	294	18,144	256	26
265	353	**Procordia**[1]	Sweden	2,145,983	109,536	142	2,013,499	290	465,806	304	23,490	211	21
266	262	**Dainippon Ink & Chemicals**[4]	Japan	2,138,956	18,662	363	2,173,136	267	507,956	283	9,518	383	28
267	161	**Texaco**	Britain	2,129,615[7]	(61,393)	470	1,022,989	428	175,301	447	3,408	481	29
268	276	**Hino Motors**[4]	Japan	2,129,021[9]	19,581[9]	361	1,262,568[9]	393	404,657[9]	333	8,302[9]	399	40
269	371	**Hachette**	France	2,126,725	58,594	222	1,515,885	355	321,047	379	14,840	299	27
270	288	**Aisin Seiki**[4]	Japan	2,125,131	47,956	247	1,615,495	341	670,709	238	11,185	359	40
271	338	**Shiseido**[12]	Japan	2,124,302[9]	78,734[9]	185	2,376,193[9]	246	1,357,309[9]	130	13,126[9]	328	43
272	251	**Zambia Industrial & Mining**[1,4]	Zambia	2,121,072	(8,410)	447	3,486,188	166	2,337,752	68	137,601	27	10
273	241	**Moore**	Canada	2,114,313	109,613	141	1,487,839	361	1,000,818	171	27,070	179	27
274	250	**Seagram**[14]	Canada	2,113,796	319,074	46	6,222,157	89	3,549,960	45	14,300	307	49
275	244	**Hattori Seiko**[4]	Japan	2,107,409	16,287	376	1,983,941	294	349,854	363	7,530	416	46
276	•	**IBM Canada**	Canada	2,103,963[7]	160,460	96	1,403,331	374	1,011,586	169	12,202	345	44
277	234	**Pioneer Concrete Services**[2]	Australia	2,088,471	70,492	203	1,392,417	376	529,851	275	7,410	421	29
278	306	**Matra**[1]	France	2,086,442	22,105	352	3,180,896	183	201,311	436	25,795	190	41
279	364	**Nixdorf Computer**	W. Germany	2,073,926[5]	100,179[5]	155	2,289,643[5]	255	1,503,943[5]	115	25,576[5]	194	44
280	270	**Mitsubishi Petrochemical**	Japan	2,071,338	21,822	354	2,416,595	242	304,182	395	3,728	476	28
281	310	**Ranks Hovis McDougall**[25]	Britain	2,063,883	75,305	192	1,158,259	412	450,269	313	34,858	129	20
282	292	**Glaxo Holdings**[2]	Britain	2,058,019	576,297	26	2,716,389	213	1,669,574	101	24,728	200	42
283	267	**Hüls**	W. Germany	2,056,325	46,060	252	1,780,940	317	610,601	253	15,013	298	28
284	296	**Entreprise Minière et Chimique**[1]	France	2,051,743	(390)	438	1,306,161	388	30,912	480	13,434	324	10
285	314	**Northern Foods**[4]	Britain	2,042,855	56,455	224	805,415	467	328,590	377	26,161	185	20
286	277	**Jujo Paper**[4]	Japan	2,022,681	18,382	366	2,558,181	229	328,970	376	6,802	428	26
287	147	**Rothmans International**[4]	Britain	2,019,930	38,637	281	2,544,194	232	641,207	247	21,833	224	21
288	282	**Plessey**[4]	Britain	2,011,873	126,680	124	1,807,248	312	771,230	210	34,366	132	36
289	355	**Konishiroku Photo Industry**[26]	Japan	1,995,295	13,878	389	2,546,974	231	849,154	192	19,000	243	28
290	308	**Kao**[4]	Japan	1,961,922	47,128	248	2,108,193	274	849,718	191	7,954	404	43
291	166	**Texaco Canada**	Canada	1,956,456[7]	203,633	72	2,683,563	215	1,061,782	161	3,326	482	29
292	307	**Reckitt & Colman**	Britain	1,949,946	126,515	126	1,475,102	362	634,688	250	34,500	131	20
293	301	**Sekisui Chemical**[4]	Japan	1,946,200	32,646	305	1,931,211	298	496,227	290	8,845	390	28
294	261	**Burmah Oil**	Britain	1,939,165	51,046	239	1,275,543	392	678,540	234	11,466	356	29
295	324	**Klöckner-Werke**[6]	W. Germany	1,938,835	223	427	2,591,411	224	371,476	352	31,179	152	33
296	359	**Pioneer Electronic**[6]	Japan	1,925,841	29,797	321	1,779,864	318	1,020,084	168	12,437	343	36
297	289	**Sumitomo Metal Mining**[4]	Japan	1,923,774	10,605	404	1,822,506	310	307,855	389	6,436	432	33
298	309	**Daido Steel**[2]	Japan	1,893,850	15,452	381	2,064,988	283	372,137	350	11,046	363	33
299	321	**Rowntree Mackintosh**	Britain	1,892,813	80,530	182	1,378,280	378	580,250	260	32,300	143	20
300	206	**Canada Development**	Canada	1,888,890	(203,776)	487	4,579,508	131	841,781	195	7,659	411	28

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THE INTERNATIONAL 500 RANKED BY SALES

RANK		COMPANY	COUNTRY	SALES	NET INCOME		ASSETS		STOCKHOLDERS' EQUITY		EMPLOYEES		INDUSTRY CODE ✓
1986	1985			$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK		RANK	
301	329	**Boehringer Ingelheim**	W. Germany	**1,884,320**	**50,666**	240	**2,298,934**	254	**823,499**	199	**22,307**	216	42
302	263	**Johnson Matthey**[4]	Britain	**1,879,272**	**18,451**	365	**713,911**	478	**316,508**	382	**7,833**	405	33
303	258	**Koa Oil**[4]	Japan	**1,868,634**[9]	**5,099**[9]	415	**1,375,462**[9]	379	**211,875**[9]	431	**1,377**[9]	499	29
304	284	**IMETAL**	France	**1,848,367**	**(84,593)**	479	**1,459,905**	366	**358,854**	360	**13,957**	315	10
305	343	**Holderbank Financière Glaris**	Switzerland	**1,829,523**[5]	**80,833**[5]	180	**4,842,751**[5]	118	**1,656,258**[5]	102	**19,779**[5]	237	32
306	335	**Stora Kopparbergs Bergslags**	Sweden	**1,822,943**	**37,312**	285	**3,384,216**	170	**387,776**	344	**17,252**	269	26
307	302	**Nisshin Steel**[4]	Japan	**1,820,804**	**30,977**	312	**3,137,973**	185	**553,542**	268	**9,666**	382	33
308	328	**Pilkington Brothers**[4]	Britain	**1,819,099**	**33,460**	302	**3,011,245**	192	**1,469,964**	119	**44,300**	106	32
309	316	**Nippon Meat Packers**[4]	Japan	**1,810,512**[21]	**37,406**[21]	284	**1,115,298**	419	**491,537**	293	**11,525**	355	20
310	305	**Nippon Gakki**[4]	Japan	**1,807,562**[21]	**40,903**[21]	273	**1,855,304**	305	**704,758**	225	**15,380**	290	47
311	297	**MacMillan Bloedel**	Canada	**1,807,293**	**128,296**	121	**1,601,376**	347	**956,119**	177	**15,102**	296	26
312	340	**SSAB (Svenskt Stål)**[1]	Sweden	**1,805,269**	**(66,347)**	473	**1,842,160**	306	**464,916**	305	**15,354**	291	33
313	400	**Lion**	Japan	**1,793,952**	**32,374**	307	**1,333,373**	386	**439,305**	323	**4,712**	462	43
314	294	**Sanyo-Kokusaku Pulp**[4]	Japan	**1,788,267**	**21,974**	353	**2,147,849**	270	**240,084**	421	**7,422**	419	26
315	352	**Babcock International**	Britain	**1,786,097**	**27,115**	332	**1,223,854**	403	**291,913**	400	**25,806**	189	45
316	346	**Sandvik Group**	Sweden	**1,784,368**	**72,519**	199	**2,282,154**	256	**517,579**	280	**24,033**	204	34
317	298	**Oki Electric Industry**[4]	Japan	**1,776,219**	**(4,918)**	442	**2,431,785**	241	**496,425**	289	**18,649**	248	36
318	114	**Charbonnages de France**[1]	France	**1,775,964**	**N.A.**		**N.A.**		**N.A.**		**42,662**	113	28
319	396	**Bosch-Siemens Hausgeräte**	W. Germany	**1,767,501**	**N.A.**		**820,201**	465	**124,773**[21]	462	**15,260**	294	36
320	256	**Hitachi Zosen**[4]	Japan	**1,764,705**	**(304,367)**	490	**5,700,473**	99	**254,786**	411	**14,630**	302	45
321	322	**Mitsui Mining**[4]	Japan	**1,761,723**	**3,027**	420	**1,605,175**	344	**150,017**	456	**2,144**	491	10
322	416	**Ford España**	Spain	**1,760,459**[7]	**N.A.**		**930,008**	437	**152,439**	455	**8,387**	395	40
323	372	**Valeo**	France	**1,754,261**	**(44,408)**	462	**1,504,975**	357	**334,659**	374	**27,358**	176	40
324	286	**Tabacalera**[1]	Spain	**1,752,758**	**30,679**	315	**900,036**	446	**294,054**	399	**8,473**	392	21
325	358	**Racal Electronics**[4]	Britain	**1,743,685**	**64,534**	213	**1,859,986**	304	**637,776**	248	**32,545**	139	36
326	•	**Boliden**	Sweden	**1,737,098**	**(23,425)**	456	**1,674,677**	324	**87,821**	472	**16,076**	281	10
327	281	**Stelco**	Canada	**1,727,101**	**41,441**	272	**2,111,000**	273	**1,113,169**	158	**17,768**	262	33
328	337	**Vallourec**	France	**1,725,035**	**(58,015)**	468	**871,296**	450	**267,302**	404	**24,720**	201	34
329	398	**Zahnradfabrik Friedrichshafen**	W. Germany	**1,719,624**	**14,037**	387	**1,598,991**	348	**186,159**	442	**N.A.**		40
330	320	**Meiji Milk Products**[4]	Japan	**1,712,921**	**10,383**	405	**865,619**	453	**231,126**	424	**7,031**	423	20
331	299	**Iscor**[1,2]	South Africa	**1,690,825**	**74,802**	194	**2,078,649**	279	**1,262,842**	143	**62,700**	79	33
332	382	**Yokohama Rubber**	Japan	**1,677,298**	**12,617**	397	**1,715,054**	328	**166,456**	450	**10,814**	365	30
333	•	**Amcor**[2,27]	Australia	**1,674,488**	**34,173**	297	**1,074,746**	424	**468,122**	303	**31,000**	154	26
334	323	**Domtar**	Canada	**1,674,032**	**104,335**	151	**1,643,519**	339	**815,424**	200	**15,332**	292	26
335	275	**Vale do Rio Doce**[1]	Brazil	**1,673,338**	**312,482**	47	**6,902,518**	79	**3,460,133**	46	**30,315**	158	10
336	326	**Nisshin Flour Milling**[4]	Japan	**1,666,350**	**26,837**	335	**864,854**	455	**386,002**	345	**3,485**	479	20
337	330	**Shin-Etsu Chemical**[13]	Japan	**1,646,963**	**30,671**	316	**2,065,014**	282	**533,358**	274	**9,505**	384	28
338	349	**Pacific Dunlop**[2,28]	Australia	**1,635,046**	**67,624**	208	**1,047,748**	426	**421,072**	328	**25,886**	188	30
339	388	**KHD (Klöckner-Humboldt-Deutz)**	W. Germany	**1,633,518**	**14,008**	388	**1,723,398**	326	**475,584**	299	**22,060**	221	45
340	313	**CODELCO-CHILE**[1]	Chile	**1,625,474**	**126,528**	125	**3,924,823**	146	**2,156,920**	73	**24,933**	199	10
341	327	**Alps Electric**[4]	Japan	**1,623,397**	**40,025**	275	**1,602,860**	346	**694,268**	226	**12,702**	335	36
342	395	**SNIA BPD**	Italy	**1,623,279**	**45,612**	254	**2,812,580**	205	**1,024,749**	166	**16,974**	271	28
343	380	**Nobel Industries**	Sweden	**1,617,967**	**24,694**	342	**2,068,150**	280	**215,369**	429	**16,256**	279	28
344	350	**Whitbread**[8]	Britain	**1,612,716**	**129,584**	119	**2,616,248**	220	**1,587,708**	108	**47,132**	96	49
345	393	**Blue Circle Industries**	Britain	**1,610,593**	**86,690**	169	**2,507,797**	236	**1,306,527**	136	**17,346**	267	32
346	332	**Honshu Paper**[4]	Japan	**1,594,827**	**2,144**	422	**2,774,285**	206	**126,458**	461	**5,986**	440	26
347	293	**Union International**	Britain	**1,594,576**	**15,006**	384	**712,807**	479	**191,269**	438	**23,532**	210	20
348	333	**Unitika**[4]	Japan	**1,586,639**	**3,723**	416	**1,704,932**	329	**107,303**	469	**7,548**	415	22
349	367	**Béghin-Say**	France	**1,578,406**	**35,490**	294	**2,130,769**	272	**365,511**	353	**9,070**	388	20
350	403	**Esselte**	Sweden	**1,578,124**	**44,103**	261	**1,366,055**	383	**261,830**	407	**18,149**	255	44

The definitions and concepts underlying the figures in this directory are explained on page 238. ✓ Industry code definitions appear on page 238. Footnotes appear on page 238.

THE INTERNATIONAL 500 RANKED BY SALES

RANK		COMPANY	COUNTRY	SALES	NET INCOME		ASSETS		STOCKHOLDERS' EQUITY		EMPLOYEES		INDUSTRY CODE √
1986	1985			$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK		RANK	
351	291	Sasol[2]	South Africa	1,576,298	249,319	61	2,321,695	251	1,131,234	152	29,300	160	28
352	498	Kymmene[29]	Finland	1,570,513	33,074	304	2,258,885	257	624,895	252	10,444	373	26
353	494	Toyo Sasn[6]	Japan	1,569,305	28,998	327	1,611,727	342	554,512	267	13,000	332	34
354	●	General Motors España	Spain	1,548,406[7]	N.A.		1,371,951	382	312,073	383	8,100	402	40
355	374	Koninklijke Wessanen	Netherlands	1,537,604	29,683	322	619,909	484	262,701	406	5,218	457	20
356	265	PETROGAL (Petróleos de Portugal)[1]	Portugal	1,534,971[21]	N.A.		2,081,633[21]	278	N.A.		6,594	430	29
357	354	Metal Box[4]	Britain	1,534,344	36,489	288	1,111,608	420	445,586	319	28,707	164	34
358	369	TI Group	Britain	1,530,796	(59,407)	469	779,350	470	254,842	410	25,400	195	34
359	389	Swedish Match	Sweden	1,528,517	92,578	161	1,448,598	368	320,131	381	25,600	192	32
360	422	Freudenberg	W. Germany	1,520,101	N.A.		1,149,344	414	400,002	337	24,280	203	40
361	417	Nichiro Gyogyo[12]	Japan	1,503,687	(4,770)	441	862,351	456	59,346	478	3,415	480	20
362	311	Empresa Colombiana de Petról.[1]	Colombia	1,498,316	13,585	392	2,176,452	266	N.A.		10,614	367	29
363	361	Mitsui Petrochemical[4]	Japan	1,498,232	25,313	340	2,068,074	281	303,767	396	4,913	461	28
364	411	Toyoda Automatic Loom Works[4]	Japan	1,490,170[9]	54,317[9]	230	1,233,699[9]	400	738,125[9]	218	6,526[9]	431	40
365	360	Onoda Cement[4]	Japan	1,477,665	17,024	373	2,201,413	264	360,270	358	6,757	429	32
366	390	Wellcome[25,30]	Britain	1,467,281	93,256	160	1,468,061	365	764,237	214	18,764	247	42
367	357	Nichirei[14]	Japan	1,467,089	11,016	403	758,424	472	186,521	441	4,650	464	20
368	458	Porsche[24]	W. Germany	1,460,473	30,823	313	727,912	476	224,027	426	8,458	394	40
369	409	Atlas Copco	Sweden	1,451,986	46,317	251	1,374,039	381	427,696	327	16,498	275	45
370	381	Consolidated-Bathurst	Canada	1,451,932	35,558	293	1,470,518	363	610,240	254	14,619	303	26
371	339	Inco	Canada	1,451,602	177,000	85	2,975,868	197	1,149,596	151	20,171	232	10
372	366	Union Laitière Normande	France	1,446,623	1,979	423	551,679	489	49,993	479	5,880	442	20
373	483	Pernod Ricard	France	1,446,183	74,504	195	1,413,047	370	693,586	227	10,123	378	49
374	405	Alfa-Laval	Sweden	1,444,776	30,424	318	1,725,100	324	400,237	336	15,460	288	45
375	259	ACI International[4]	Australia	1,443,760	55,024	228	1,434,084	369	691,446	228	21,200	228	32
376	433	Kyowa Hakko Kogyo	Japan	1,437,379	37,063	286	1,672,716	335	644,934	245	6,113	437	42
377	452	FAG Kugelfischer Georg Schäfer	W. Germany	1,435,515	42,732	269	1,592,648	349	474,394	300	32,279	144	34
378	212	Britoil	Britain	1,434,865	(24,790)	458	3,054,691	189	1,119,139	157	2,383	488	29
379	334	Daishowa Paper[4]	Japan	1,432,940	18,481	364	2,374,037	247	190,242	439	5,113	458	26
380	463	Heraeus Holding	W. Germany	1,413,031	18,229	367	774,961	471	390,371	342	7,555	414	33
381	●	Outokumpu[1]	Finland	1,409,678	(21,090)	453	1,995,599	292	121,961	463	15,168	295	33
382	370	Rauma-Repola	Finland	1,407,115	62,876	217	2,208,718	263	456,412	307	14,022	314	26
383	421	Kanto Auto Works[4]	Japan	1,405,428[9]	13,699[9]	391	440,349[9]	495	118,457[9]	464	5,573[9]	449	40
384	443	Enso-Gutzeit[1]	Finland	1,405,186	33,190	303	2,383,605	245	609,185	255	15,776	284	26
385	373	Mitsui Mining & Smelting[4]	Japan	1,402,727	(14,563)	450	1,749,279	320	114,032	466	7,653	412	33
386	376	Morinaga Milk Industry[4]	Japan	1,402,628	7,026	412	848,581	457	180,963	446	5,100	459	49
387	378	Mitsubishi Rayon[4]	Japan	1,402,528	15,341	382	1,827,630	307	336,470	372	6,155	436	28
388	471	Ivaco	Canada	1,399,364	31,726	309	1,229,821	401	438,068	324	12,000	349	33
389	418	Source Perrier[10]	France	1,397,344[21]	29,454[21]	323	518,837	490	107,881	468	12,560	337	20
390	385	Pearson	Britain	1,397,314	94,465	159	1,404,520	373	N.A.		27,800	170	27
391	461	Minolta Camera[4]	Japan	1,396,136	49,621	243	1,726,458	323	454,065	309	10,590	369	38
392	386	Meiji Seika[4]	Japan	1,393,394	11,419	402	1,011,757	429	543,114	270	5,589	447	20
393	345	Dofasco	Canada	1,392,020	97,781	157	2,019,497	289	1,195,782	145	12,800	334	33
394	379	Itoham Foods[8]	Japan	1,386,705	17,260	369	797,474	468	402,083	334	5,778	445	20
395	363	Mitsubishi Gas Chemical[4]	Japan	1,382,988	17,671	368	1,590,816	351	390,952	340	5,246	456	28
396	●	Boral[2]	Australia	1,379,087	52,714	235	1,116,460	418	557,124	265	16,700	274	32
397	414	Northern Engineering Industries	Britain	1,375,164	(87,864)	480	899,433	447	153,587	454	26,480	184	45
398	356	Sumitomo Heavy Industries[4]	Japan	1,372,777	(18,870)	452	2,575,940	227	310,118	384	8,500	391	45
399	441	Rheinische Braunkohlenwerke	W. Germany	1,370,858[9]	599[9]	425	3,590,727[9]	161	222,771[9]	427	16,805[9]	272	10
400	348	Mitsui Engineering & Shipbldg.[4]	Japan	1,370,144	(11,464)	449	2,630,473	219	450,456	312	11,702	352	45

The definitions and concepts underlying the figures in this directory are explained on page 238. √ Industry code definitions appear on page 238. Footnotes appear on page 238.

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THE INTERNATIONAL 500 RANKED BY SALES

RANK 1986	RANK 1985	COMPANY	COUNTRY	SALES $ THOUSANDS	NET INCOME $ THOUSANDS	NET INCOME RANK	ASSETS $ THOUSANDS	ASSETS RANK	STOCKHOLDERS' EQUITY $ THOUSANDS	STOCKHOLDERS' EQUITY RANK	EMPLOYEES	EMPLOYEES RANK	INDUSTRY CODE ✓
401	397	Kuraray[4]	Japan	1,360,313	13,021	395	1,825,236	308	163,919	451	8,347	397	28
402	368	Varity[14,31]	Canada	1,359,300	(23,300)	455	1,504,100	357	342,100	370	18,969	244	45
403	478	Daikin[12]	Japan	1,357,911	29,826	320	1,107,103	421	325,875	378	7,580	413	45
404	492	Linde	W. Germany	1,349,388[5]	48,727	245	1,592,553	350	480,881	298	14,679[5]	301	45
405	449	SIDOR[1]	Venezuela	1,345,648	129,038	120	4,512,410	135	2,185,123	72	17,635	263	33
406	446	Douwe Egberts[2]	Netherlands	1,343,716	54,854	229	915,347	443	407,705	331	7,692	410	20
407	375	Toyota Auto Body[4]	Japan	1,337,322[9]	12,401[9]	398	467,489[9]	492	149,876[9]	457	6,973[9]	424	40
408	384	Ford Brasil	Brazil	1,331,311[7]	80,468	183	835,571	462	257,950	409	20,000	236	40
409	420	Indústrias Votorantim	Brazil	1,327,710	193,087	75	1,929,810	299	1,517,849	113	57,666	83	10
410	474	Sumitomo Rubber	Japan	1,324,660	17,057	371	1,683,279	332	127,991	460	10,000	381	30
411	435	Kemira[1]	Finland	1,321,908	56,588	223	1,665,947	336	453,101	311	11,624	353	28
412	436	Nippon Seiko[23]	Japan	1,318,271[7]	42,601	270	2,044,708	285	783,860	205	10,745	366	45
413	•	IBM Nederland	Netherlands	1,313,481[7]	102,073	153	838,110	460	581,740	259	5,820	444	44
414	387	Mitsubishi Mining & Cement[4]	Japan	1,309,543	13,224	394	1,796,791	314	360,552	357	5,579	448	32
415	423	AGA	Sweden	1,306,470	39,696	276	2,023,142	288	661,771	239	14,584	304	28
416	•	Norcem	Norway	1,305,094	9,190	408	1,304,000	389	146,169	459	14,141	312	45
417	472	Valmet[1]	Finland	1,304,906	33,705	300	1,226,111	402	345,138	368	17,495	265	45
418	496	Carl-Zeiss-Stiftung[6]	W. Germany	1,304,175	23,170	349	1,318,084	387	197,822	437	25,196	196	38
419	413	Bharat Heavy Electricals[1,4]	India	1,296,580	69,024	207	2,245,752	261	448,745	317	74,915	58	45
420	434	ARBED	Luxembourg	1,294,064[9]	19,922[9]	359	1,793,464[9]	315	658,914[9]	240	13,064[9]	330	33
421	419	Consolidated Gold Fields[2]	Britain	1,286,694	82,534	178	1,965,403	295	765,847	213	13,085	329	32
422	347	Unión Explosivos Rio Tinto	Spain	1,284,609[9]	20,881[9]	356	1,204,711[9]	406	413,091[9]	330	7,411[9]	420	29
423	•	Free State Consolidated Gold Mines[6]	South Africa	1,277,697	373,612	40	1,822,564	309	26,053	481	113,845	38	10
424	454	PWA	W. Germany	1,273,416	30,499	317	865,660	452	159,291	453	8,903	389	26
425	401	Redland[4]	Britain	1,267,628	90,328	164	1,119,271	417	449,565	316	12,041	347	32
426	365	Kyocera[4]	Japan	1,262,705	83,177	175	1,998,896	291	1,643,468	104	17,319	268	36
427	•	Ford Motor of Australia	Australia	1,259,452[7]	12,888	396	576,414	487	209,577	433	12,022	348	40
428	399	Omron Tateisi Electronics[4]	Japan	1,254,086	11,650	401	1,520,287	354	604,234	256	12,824	333	36
429	444	AECI	South Africa	1,239,960	77,327	187	924,093	441	414,452	329	27,000	180	28
430	448	Citizen Watch[4]	Japan	1,236,260	15,626	379	1,407,455	372	517,658	279	10,951	364	38
431	412	Doosan	South Korea	1,234,432	17,055	372	1,236,928	399	244,042	419	14,396	306	49
432	455	GECHEM	Belgium	1,230,530	(81,994)	478	1,132,895	415	81,626	473	10,179	376	28
433	•	Asahi Breweries	Japan	1,227,466	9,199	407	1,691,478	330	221,781	428	4,531	466	49
434	•	Axel Springer	W. Germany	1,225,265	43,475	265	597,986	485	21,211	483	11,284	358	27
435	•	Liebherr International	Switzerland	1,223,554	36,475	289	1,002,045	433	496,860	288	13,431	325	45
436	410	General Motors do Brasil	Brazil	1,218,631[7]	N.A.		865,406	454	332,073	375	23,660	208	40
437	476	Jaguar	Britain	1,218,066	122,335	134	975,337	436	347,201	367	11,325	357	40
438	406	Molson[4]	Canada	1,217,426	26,067	338	814,362	466	306,294	390	11,000	363	49
439	312	Mobil Oil Française	France	1,215,873[7,9]	56,267[9]	226	638,941[9]	483	187,469[9]	440	1,750[9]	496	29
440	•	Sapporo Breweries	Japan	1,211,875	27,383	331	1,675,237	333	499,457	287	4,318	467	49
441	451	Prouvost	France	1,211,698	9,092	410	966,770	437	182,707	444	17,932	258	22
442	•	Wärtsilä	Finland	1,200,493	65,635	212	2,213,956	262	871,752	188	15,623	285	37
443	450	NTN Toyo Bearing[32]	Japan	1,191,160	26,676	336	1,800,987	313	588,717	258	10,233	375	40
444	426	KF Industri	Sweden	1,186,696	36,132	292	847,738	458	212,164	430	12,445	342	20
445	•	Mobil Oil Canada	Canada	1,186,103[7]	72,558	198	2,862,077	203	986,731	172	1,700	497	29
446	415	Nissan Diesel Motor[4]	Japan	1,183,292[9]	5,334[9]	414	1,363,660[9]	384	232,213[9]	423	6,109[9]	438	40
447	•	Toto[12]	Japan	1,182,832	49,891	241	1,244,770	398	646,918	244	7,753	407	32
448	437	Canadian General Electric	Canada	1,181,753	40,505	274	788,567	469	337,133	371	11,552	354	45
449	445	Superfos	Denmark	1,181,087	(37,847)	461	738,483	474	115,818	465	5,500	451	28
450	•	SWEDYARDS (Svenska Varv)[1]	Sweden	1,177,661	(1,627)	439	1,159,249	411	246,551	416	13,646	322	37

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THE INTERNATIONAL 500 RANKED BY SALES

RANK		COMPANY	COUNTRY	SALES	NET INCOME		ASSETS		STOCKHOLDERS' EQUITY		EMPLOYEES		INDUSTRY CODE ✓
1986	1985			$ THOUSANDS	$ THOUSANDS	RANK	$ THOUSANDS	RANK	$ THOUSANDS	RANK		RANK	
451	477	**Casio Computer**[32]	Japan	**1,168,163**	**31,592**	310	**1,657,294**	338	**644,696**	246	**7,832**	406	44
452	447	**Arla**[2]	Sweden	**1,165,886**	**13,378**	393	**492,691**	491	**108,025**	467	**6,319**	433	20
453	344	**Sankyo**[4]	Japan	**1,161,857**	**38,844**	280	**1,410,991**	371	**688,390**	230	**5,499**	452	42
454	438	**Yoshida Kogyo**[4]	Japan	**1,148,058**	**42,943**	268	**2,689,093**	214	**741,419**	217	**14,231**	309	32
455	•	**QP Corp.**[12]	Japan	**1,145,879**	**15,323**	383	**744,276**	473	**245,844**	417	**3,638**	477	20
456	325	**Grupo Industrial Alfa**	Mexico	**1,145,423**	**(509,877)**	494	**2,148,396**	269	**(399,303)**	497	**28,349**	167	33
457	465	**IMI**	Britain	**1,144,577**	**71,875**	201	**920,929**	442	**427,998**	326	**21,559**	227	34
458	•	**Brother Industries**[3]	Japan	**1,144,221**	**34,123**	298	**1,254,974**	397	**600,584**	257	**8,030**	403	44
459	466	**Shionogi**[4]	Japan	**1,143,923**	**37,976**	282	**1,355,236**	385	**769,240**	211	**8,145**	401	42
460	•	**Diesel Kiki**[10]	Japan	**1,138,351**	**18,742**	362	**1,153,709**	413	**320,814**	380	**7,745**	408	40
461	•	**Mejeriselskabet Danmark**[6]	Denmark	**1,129,377**	**53,845**	232	**451,672**	493	**106,219**	470	**3,776**	474	20
462	473	**Nisshinbo**	Japan	**1,127,548**	**39,005**	278	**1,062,891**	427	**620,494**	253	**7,716**	410	22
463	457	**Lesieur**	France	**1,120,357**	**23,630**	346	**673,890**	480	**211,722**	432	**5,953**	441	20
464	475	**Nihon Cement**[23]	Japan	**1,116,948**	**(5,828)**	443	**2,164,680**	268	**205,106**	434	**5,460**	453	32
465	280	**Dome Petroleum**	Canada	**1,116,741**	**(1,582,290)**	499	**3,551,050**	163	**(1,758,870)**	500	**3,800**	472	29
466	456	**Toyo Soda Manufacturing**[4]	Japan	**1,115,493**	**20,766**	357	**1,959,944**	296	**276,824**	402	**5,000**	460	28
467	•	**Nan Ya Plastics**	Taiwan	**1,115,154**	**60,991**	218	**824,051**	463	**348,551**	364	**10,571**	371	30
468	•	**SEITA**[1]	France	**1,103,574**	**(28,360)**	459	**1,201,406**	407	**358,820**	361	**7,498**	417	21
469	460	**Rengo**[4]	Japan	**1,098,872**	**7,139**	411	**903,925**	444	**181,059**	445	**4,700**	463	26
470	•	**Georg Fischer**	Switzerland	**1,096,858**	**15,566**	380	**1,121,437**	416	**360,595**	356	**14,578**	305	40
471	•	**A. Ahlstrom**	Finland	**1,094,353**	**12,142**	400	**1,609,912**	343	**244,552**	418	**11,946**	350	26
472	331	**Mobil Oil**	Britain	**1,093,897**[7]	**(23,626)**	457	**941,749**	438	**376,604**	348	**3,130**	485	29
473	432	**ENSIDESA**[1]	Spain	**1,091,490**	**(103,365)**	485	**2,474,623**	240	**789,977**	204	**18,200**	254	33
474	469	**Denki Kagaku Kogyo**[4]	Japan	**1,087,914**	**14,468**	386	**1,724,262**	325	**305,107**	392	**5,310**	455	28
475	464	**Amatil**[10]	Australia	**1,084,983**	**52,577**	237	**723,247**	477	**304,313**	394	**15,464**	287	21
476	484	**Van Leer**[33]	Netherlands	**1,083,309**	**33,552**	301	**842,681**	459	**342,143**	369	**13,862**	318	34
477	351	**Métallurgie Hoboken-Overpelt**[6]	Belgium	**1,082,089**[9]	**16,592**[9]	375	**928,188**[9]	440	**274,672**[9]	403	**6,844**[9]	426	33
478	488	**Vaal Reefs Exploration & Mining**	South Africa	**1,077,006**	**271,851**	56	**1,100,356**	422	**4,343**	484	**51,378**	88	10
479	485	**Grundig**[4]	W. Germany	**1,076,333**	**(18,008)**	451	**837,891**	461	**301,758**	398	**19,213**	240	36
480	•	**Moët-Hennessy**	France	**1,075,339**	**119,349**	137	**1,686,340**	331	**657,555**	241	**7,429**	418	49
481	499	**EBARA**[23]	Japan	**1,067,264**	**65,779**	211	**1,381,002**	377	**447,822**	318	**6,197**	435	45
482	•	**United Breweries**[6]	Denmark	**1,062,156**	**48,584**	246	**1,168,653**	410	**399,394**	339	**14,760**	300	49
483	487	**Showa Sangyo**[13]	Japan	**1,053,122**	**9,143**	409	**653,547**	481	**171,628**	448	**2,233**	490	20
484	481	**Syntex**[24]	Panama	**1,048,531**	**198,591**	73	**1,255,770**	396	**730,549**	219	**9,200**	386	42
485	440	**Chrysler de México**	Mexico	**1,046,630**[7]	**23,517**	347	**563,649**	488	**262,853**	405	**10,576**	370	40
486	•	**Schindler Holding**	Switzerland	**1,042,432**	**27,074**	333	**873,792**	449	**334,696**	373	**20,994**	229	37
487	•	**Mo och Domsjö**	Sweden	**1,037,630**	**22,541**	351	**1,657,870**	337	**304,510**	393	**7,090**	422	26
488	491	**Toyo Tire & Rubber**[4]	Japan	**1,036,103**	**15,798**	378	**1,005,394**	430	**74,257**	474	**6,259**	434	30
489	468	**China Steel**[1,2]	Taiwan	**1,035,914**	**147,226**	107	**3,214,507**	180	**2,309,815**	69	**8,357**	396	33
490	•	**Sachs Group**	W. Germany	**1,034,050**	**N.A.**		**N.A.**		**N.A.**		**18,314**	253	40
491	493	**Kanegafuchi**[4]	Japan	**1,020,070**	**28,633**	328	**1,048,181**	425	**389,341**	343	**4,600**	465	28
492	•	**Vickers**	Britain	**1,014,761**	**45,619**	253	**822,194**	464	**309,694**	385	**15,871**	282	45
493	•	**SMH**	Switzerland	**1,012,912**	**38,915**	279	**983,271**	435	**401,487**	335	**11,934**	351	38
494	•	**English China Clays**[6]	Britain	**1,011,001**	**60,367**	220	**1,005,221**	431	**676,094**	236	**12,524**	338	10
495	500	**Israel Aircraft Industries**[1,4]	Israel	**1,009,000**[21]	**(31,899)**[21]	460	**1,025,000**[21]	427	**309,000**[21]	387	**22,208**	219	41
496	•	**Diehl**	W. Germany	**998,584**	**N.A.**		**891,276**	448	**N.A.**		**13,759**	320	34
497	495	**Daicel Chemical Industries**[4]	Japan	**998,214**	**32,538**	306	**1,221,053**	404	**373,074**	349	**4,174**	469	28
498	•	**DRG**	Britain	**997,746**	**44,739**	259	**589,145**	486	**249,356**	413	**14,065**	313	26
499	479	**Jefferson Smurfit Group**[14]	Ireland	**994,751**	**22,981**	350	**728,187**	475	**253,014**	412	**13,000**	331	26
500	470	**Siderúrgica Nacional**[1]	Brazil	**994,456**	**(220,162)**	489	**3,820,745**	151	**1,163,236**	149	**20,889**	230	33
		TOTALS		**2,092,486,759**	**51,663,625**		**2,254,570,670**		**699,110,767**		**18,592,549**		

The definitions and concepts underlying the figures in this directory are explained on page 238. ✓ Industry code definitions appear on page 238. Footnotes appear on page 238.

WHO DID BEST AND WORST

CHANGE IN SALES

THE TEN BIGGEST INCREASES

	SALES RANK	
Free State Consol. Gold Mines	423	**404.6%**
Schneider	148	**333.9**
British Coal	62	**190.2**
Coats Viyella	219	**186.9**
Norcem	416	**177.0**
Guinness	179	**176.9**
Kymmene	352	**73.4**
Outokumpu	381	**72.7**
Toyo Sash	353	**72.2**
Hillsdown Holdings	221	**69.8**

THE TEN BIGGEST DECREASES

Charbonnages de France	318	**59.5%**
Türkiye Petrolleri	175	**54.9**
VÖEST-Alpine	68	**48.1**
Pemex (Petróleos Mexicanos)	40	**45.9**
Esso UK	101	**39.8**
EMP (Nacional del Petróleo)	177	**39.4**
Britoil	378	**38.5**
Dome Petroleum	465	**37.4**
Texaco Canada	291	**36.6**
Texaco	267	**33.0**

THE INDUSTRY MEDIANS

	INCREASES
Soaps, cosmetics	**42.9%**
Rubber products	**28.9**
Scientific & photographic equipment	**28.4**
Aerospace	**27.4**
Computers	**26.9**
Publishing, printing	**26.7**
Motor vehicles and parts	**25.9**
Industrial and farm equipment	**20.1**
Pharmaceuticals	**19.6**
Metal products	**18.5**
Forest products	**17.4**
Electronics	**15.5**
Mining, crude-oil production	**15.2**
Building materials	**15.2**
Tobacco	**14.9**
Food	**14.4**
Textiles	**13.1**
Chemicals	**12.9**
Beverages	**12.4**
Metals	**11.0**
	DECREASES
Petroleum refining	**12.5%**

CHANGE IN PROFITS

THE TEN BIGGEST INCREASES†

	SALES RANK	
Steel Authority of India	182	**3545.1%**
Yamaha Motor	238	**1966.9**
Mobil Oil Française	440	**1823.0**
Korea Explosives	181	**1289.5**
General Sekiyu	211	**1019.7**
Taiyo Fishery	121	**828.3**
Thomson	50	**808.1**
Peugeot	23	**757.7**
ISCOR	331	**711.7**
Lucas Industries	242	**651.0**

THE TEN BIGGEST DECREASES†

Thorn EMI	129	**98.8%**
Klöckner-Werke	295	**98.0**
Kanebo	223	**91.9**
Sanyo Electric	70	**91.8**
Idemitsu Kosan	44	**83.9**
Ford Motor of Australia	428	**82.2**
Omron Tateisi Electronics	429	**73.9**
Kuwait Petroleum	27	**73.4**
Mitsubishi Chemical Ind.	95	**67.1**
MAN	111	**67.0**

THE INDUSTRY MEDIANS

	INCREASES
Rubber products	**81.4%**
Tobacco	**53.6**
Textiles	**50.7**
Food	**45.6**
Soaps, cosmetics	**44.5**
Building materials	**35.6**
Beverages	**31.8**
Scientific & photographic equipment	**18.9**
Pharmaceuticals	**17.2**
Publishing, printing	**15.3**
Motor vehicles and parts	**10.3**
Petroleum refining	**9.1**
Chemicals	**7.9**
Metal products	**7.8**
Computers	**1.8**
	DECREASES
Aerospace	**27.6%**
Industrial and farm equipment	**8.5**
Mining, crude-oil production	**5.6**
Forest products	**1.0**
Electronics	**0.6**
Metals	**0.0**

†Listings exclude money losers.

THE MONEY LOSERS

		LOSS
	SALES RANK	**$ Thousands**
Schlumberger	103	**2,017,591**
Dome Petroleum	465	**1,582,290**
Rover Group*	107	**1,308,570**
Sacilor*	80	**1,069,910**
Renault*	18	**844,233**
Usinor*	118	**717,460**
Grupo Industrial Alfa*	457	**509,877**
ALUSUISSE (Swiss Aluminium)*	168	**381,927**
Groupe CdF Chimie*	180	**374,396**
Coal India*	260	**330,878**
Hitachi Zosen	320	**304,367**
Siderúrgica Nacional*	500	**220,162**
YPF (Yacimientos Petróliferos)*	138	**213,848**
Canada Development	300	**203,776**
EFIM*	161	**144,151**
ENSIDESA*	473	**103,365**
Neste	109	**91,380**
Ultramar	205	**91,091**
Vauxhall Motors*	258	**90,504**
Cockerill Sambre*	150	**90,167**
Northern Engineering Ind.	397	**87,864**
IMETAL	304	**84,593**
GECHEM	433	**81,994**
Saarbergwerke*	193	**77,096**
British Coal*	62	**68,848**
Total Cie Française des Pétroles	28	**68,006**
Isuzu Motors	78	**67,689**
SSAB (Svenskt Stål)*	312	**66,347**
Adam Opel*	71	**65,189**
Pechiney	106	**65,119**
Texaco	267	**61,393**
TI Group	358	**59,407**
Vallourec	328	**58,015**
Canadian Pacific	41	**57,764**
Maruzen Oil	113	**57,298**
CSR*	230	**54,799**
Oerlikon-Bührle	239	**50,590**
Norsk Hydro	63	**50,544**
Valeo*	323	**44,408**
Superfos	450	**37,847**
Israel Aircraft Industries	495	**31,899**
SEITA	468	**28,360**
Britoil	378	**24,790**
Mobil Oil	472	**23,626**
Boliden	326	**23,425**
Varity	402	**23,300**
BOC Group	187	**21,876**
Outokumpu	381	**21,090**
Sumitomo Heavy Industries	398	**18,870**
Grundig*	479	**18,008**
Mitsui Mining & Smelting	385	**14,563**
Mitsui Engineering & Shipbldg.	400	**11,464**
SNECMA	254	**9,674**
Zambia Industrial & Mining*	272	**8,410**
Tokyo Sanyo Electric	196	**8,354**
Kawasaki Heavy Industries	149	**6,157**
Mobil Oil Italiana*	231	**5,991**
Nihon Cement*	464	**5,828**
Oki Electric Industry	317	**4,918**
Nichiro Gyogyo*	361	**4,770**
VÖEST-Alpine*	68	**3,773**
SWEDYARDS (Svenska Varv)	451	**1,627**
Entreprise Minière et Chimique	284	**390**

* Also lost money in 1985.

ARRIVALS AND DEPARTURES

NEWCOMERS AND RETURNEES*

	1986 SALES RANK
Ahlstrom (A.) (1982: 488)	471
Amcor	333
Asahi Breweries	433
Axel Springer (1983: 446)	434
Boliden (1982: 467)	326
Boral	396
Brother Industries	458
Coats Viyella	219
DRG (1983: 479)	498
Diehl (1980: 483)	496
Diesel Kiki	460
English China Clays (1983: 498)	494
Ford Motor of Australia	427
Free State Consolidated Gold Mines	423
Fischer (Georg) (1982: 492)	470
General Motors España	354
Groupe CdF Chimie	180
Hyundai Heavy Industries	186
Hyundai Motor	261
IBM Canada	276
IBM Nederland	413
Japan Tobacco	108
Liebherr International (1980: 489)	435
Mejeriselskabet Danmark	461
Mo och Domsjö (1981: 496)	487
Mobil Oil Canada	445
Moët-Hennessy	480
Nan Ya Plastics (1984: 474)	467
Norcem	416
Outokumpu	381
QP Corp.	455
SEITA (1983: 480)	468
SWEDYARDS (Svenska Varv) (1983: 365)	450
Sachs Group	490
Sapporo Breweries (1975: 493)	440
Schindler Holding (1983: 466)	486
Schneider (1983: 220)	148
SMH	493
Toto	447
United Breweries (1983: 484)	482
Vickers (1983: 430)	492
Wärtsilä (1984: 442)	442

DEPARTURES

	1985 SALES RANK
AEG Aktiengesellschaft [1]	138
Abitibi-Price [1]	264
Austria Tabakwerke	486
Bowater [2]	304
British Shipbuilders	439
Burns Philp [2]	459
Butano	490
Coats Patons [1]	362
Cookson Group	427
Dillinger Hüttenwerke	497
Distillers [1]	408
East Asiatic [2]	319
Elkem	482
Empresa Nacional del Petróleo (Chile)	377
Esso Belgium [3]	233
Esso Nederland [3]	317
Federale Volksbeleggings Beperk	425
Fuji Kosan	424
GECAMINES	480
Gulf Oil Great Britain	407
Hiram Walker Resources [1]	194
Hispanoil (Hispánica de Petróleos)	431
Hyundai [4]	25
ISAB (Industria Siliciana Asfalti Bitumi) [3]	453
Imperial Group [1]	148
MBB (Messerschmitt-Bölkow-Blohm) [3]	245
M.I.M. Holdings	489
Merck	429
Nippon Light Metal [1]	278
Oljekonsumenternas Förbund	391
PETRONOR (Petróleos del Norte)	402
PETROPERU [3]	392
Philippine National Oil	404
Premier Group	383
Pertamina [3]	35
Rütgerswerke [1]	428
SEAT [1]	394
Suncor	462
TBG [3]	271
USIMINAS	467
Valores Industriales	430
Weston (George) Holdings [2]	39

* Figures in parentheses indicate year and sales rank the last time the company was listed.

[1] Acquired by another 500 company.

[2] No longer classified as an industrial.

[3] Financial data not available.

[4] Figures for Hyundai units now published separately.

THE 500 BY COUNTRY

	1-100	101-200	201-300	301-400	401-500	Total	Largest Company	$ Thousands	Rank
Argentina	0	1	0	0	0	1	YPF (Yacimientos Petróliferos)	4,208,373	138
Australia	1	1	2	4	2	10	Broken Hill Proprietary	5,937,725	84
Austria	1	0	1	0	0	2	VÖEST-Alpine	7,079,471	68
Belgium	1	2	0	0	2	5	Petrofina	7,847,250	55
Brazil	1	0	0	1	4	6	Petrobrás (Petróleo Brasileiro)	14,701,534	26
Britain	10	20	22	13	7	72	British Petroleum	39,855,564	2
Canada	5	5	9	7	5	31	General Motors of Canada	13,335,100	31
Chile	0	0	0	1	0	1	CODELCO-CHILE	1,625,474	340
Colombia	0	0	0	1	0	1	Empresa Colombiana de Petróleos	1,498,316	362
Denmark	0	0	0	0	3	3	Superfos	1,181,087	450
Finland	0	1	1	4	4	10	Neste	4,973,007	109
France	11	7	9	8	6	41	Renault	17,661,021	18
India	1	2	1	0	1	5	Indian Oil	8,076,784	53
Ireland	0	0	0	0	1	1	Jefferson Smurfit Group	994,751	499
Israel	0	0	1	0	1	2	Koor Industries	—	262
Italy	4	2	2	1	0	9	IRI	31,561,709	3
Japan	27	30	30	34	31	152	Toyota Motor	31,553,827	4
Kuwait	1	0	0	0	0	1	Kuwait Petroleum	13,911,716	27
Luxembourg	0	0	0	0	1	1	ARBED	1,294,064	420
Mexico	1	0	0	0	2	3	Pemex (Petróleos Mexicanos)	11,032,902	40
Netherlands	3	0	2	1	3	9	Philips' Gloeilampenfabrieken	22,471,263	11
Netherlands Antilles	0	1	0	0	0	1	Schlumberger	5,056,183	103
Netherlands/Britain	2	0	0	0	0	2	Royal Dutch/Shell Group	64,843,217	1
New Zealand	0	0	1	0	0	1	Fletcher Challenge	2,179,537	259
Norway	2	0	0	0	1	3	Norsk Hydro	7,331,609	63
Panama	0	0	0	0	1	1	Syntex	1,048,531	484
Portugal	0	0	0	1	0	1	PETROGAL (Petróleos de Portugal)	1,534,971	356
South Africa	1	0	1	2	3	7	Barlow Rand	5,944,771	83
South Korea	4	4	2	0	1	11	Samsung	16,522,664	21
Spain	0	1	1	3	2	7	EMP	2,988,411	177
Sweden	3	3	2	9	5	22	Volvo	11,795,263	35
Switzerland	3	6	2	1	4	16	Nestlé	21,153,285	12
Taiwan	0	1	0	0	2	3	Chinese Petroleum	5,049,625	104
Turkey	0	3	0	0	0	3	Koç Holding	3,647,087	154
Venezuela	1	0	0	0	1	2	Petróleos de Venezuela	9,249,726	49
West Germany	17	10	10	9	7	53	Daimler-Benz	30,168,550	5
Zambia	0	0	1	0	0	1	Zambia Industrial & Mining	2,121,072	272

NOTES TO THE INTERNATIONAL 500

SALES

All companies on the list must have derived more than 50% of their sales from manufacturing and/or mining. Sales do not include excise taxes or customs duties levied according to either volume or value sales, and so the figures for some companies—most of which sell gasoline, liquor, or tobacco—may be lower than those published by the companies themselves. Unless otherwise noted, figures exclude intracompany transactions and include consolidated subsidiaries more than 50% owned, either fully or on a prorated basis. Figures have been converted to dollars using an exchange rate that consists of the official average rate during each company's fiscal year (ended December 31, 1986, unless otherwise noted).

NET INCOME

Net income is shown after taxes, minority interests, and extraordinary items. Figures have been converted to dollars using an exchange rate that consists of the official average rate during each company's fiscal year (ended December 31, 1986, unless otherwise noted).

ASSETS

Totals shown at each company's year-end. Figures have been converted to dollars at the official exchange rate at each company's year-end.

STOCKHOLDERS' EQUITY

Stockholders' equity is shown at each company's year-end. Minority interest is not included. Figures have been converted to dollars at the official exchange rate at each company's year-end.

EMPLOYEES

The figure shown is either a year-end or yearly average number as published.

INDUSTRY CODE

Industry code numbers used in the directory indicate which industry represents the greatest volume of industrial sales for each company. The numbers refer to the industry groups below, which are based on categories established by the U.S. Office of Management and Budget and issued by the Federal Statistical Policy and Standards Office. They are the same industry groups as those shown in the tables beginning on page 236. The median figures in the tables refer only to results of companies in the 500. No attempt has been made to calculate medians in groups with fewer than four companies.

10	Mining, crude-oil production
20	Food
21	Tobacco
22	Textiles
23	Apparel
25	Furniture
26	Forest products
27	Publishing, printing
28	Chemicals
29	Petroleum refining
30	Rubber products
31	Leather
32	Building materials
33	Metals
34	Metal products
36	Electronics
37	Transportation equipment
38	Scientific and photographic equipment
40	Motor vehicles and parts
41	Aerospace
42	Pharmaceuticals
43	Soaps, cosmetics
44	Computers
45	Industrial and farm equipment
46	Jewelry, silverware
47	Toys, sporting goods
49	Beverages

Most of the figures in this FORTUNE International 500 Directory were prepared by Terence P. Paré and Wilton Woods.

FOOTNOTES TO THE 500

● Indicates that a corporation was not among the 500 in 1985.

[1] Company owned by its government.

[2] Figures are for fiscal year ended June 30, 1986.

[3] Figures are for fiscal year ended November 20, 1986.

[4] Figures are for fiscal year ended March 31, 1986.

[5] Figure includes certain subsidiaries owned 50% or less, either fully or on a prorated basis.

[6] Figures are for fiscal year ended September 30, 1986.

[7] Revenues include sales to other affiliates of U.S. parent also on this list.

[8] Figures are for fiscal year ended February 28, 1986.

[9] Figures are for parent company only.

10

[10] Figures are for fiscal year ended October 31, 1986.

[11] British Coal (62): Name was changed from National Coal Board on March 5, 1987.

[12] Figures are for fiscal year ended November 30, 1986.

[13] Figures are for fiscal year ended May 31, 1986.

[14] Figures are for fiscal year ended January 31, 1986.

[15] Rover Group (107): Name was changed from BL on July 10, 1986.

[16] MAN (111): Name was changed from Gutehoffnungshütte on June 6, 1986.

[17] Figures are for fiscal year ended October 20, 1986.

[18] GKN (172): Name was changed from Guest, Keen & Nettlefolds on June 2, 1986.

[19] Figures are for fiscal year ended April 15, 1986.

20

[20] EMP (177): formerly listed as ENPETROL.

[21] Figure is a FORTUNE estimate.

[22] Coats Viyella (219): Name was changed from Vantona Viyella on March 13, 1986.

[23] Figures are for fiscal year ended April 30, 1986.

[24] Figures are for fiscal year ended July 31, 1986.

[25] Figures are for fiscal year ended August 31, 1986.

[26] Figures are for fiscal year ended April 20, 1986.

[27] Amcor (333): Name was changed from Australian Paper Manufacturers on May 1, 1986.

[28] Pacific Dunlop (338): Name was changed from Dunlop Olympic on January 2, 1986.

[29] Kymmene (352): Name was changed from Kymmene-Strömberg on August 29, 1986.

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[30] Wellcome (366): Name was changed from Wellcome Foundation on January 2, 1986.

[31] Varity (402): Name was changed from Massey-Ferguson to Varity on June 17, 1986.

[32] Figures are for fiscal year ended March 20, 1986.

[33] Van Leer (475): formerly listed as Royal Packaging Industries Van Leer.

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THE BIGGEST BANKS OUTSIDE THE U.S.

IN THE YEAR of the Tiger, the Japanese giants made catnip out of Citicorp. Dai-Ichi Kangyo, No. 1 on FORTUNE's list of the 100 biggest non-U.S. banks for the fourth straight year, and four other Japanese banks surpassed Citi's $196 billion in assets for the first time last year. Thanks largely to the yen's 40% leap against the dollar, Japanese banks took eight of the top ten spots; only two French rivals, Crédit Agricole (No. 7) and Banque Nationale de Paris (No. 8), kept pace.

Japan continued to be the world's largest international lender in 1986, as it was in 1985. Its current account surplus hit a record $86 billion last year, putting more cash in the banks' coffers. In contrast to their mighty size, their profits (in yen) remain meek because of keen competition and low-risk ventures overseas. "Look at their return on assets and return on equity," points out Mark Biderman, bank analyst at Oppenheimer & Co. "They're abysmal."

Banks outside the U.S. fared well overall as non-U.S. currencies strengthened. Measured in dollars, assets rose 37%, deposits 36%, and profits 31%. Five years ago only one bank boasted assets above $100 billion; now 25 do, including 17 from Japan.

Well behind the Japanese juggernaut, West Germany and France each have 11 banks on the list. In France state-owned banks are gearing up for stiffer competition in the face of privatization. Paribas (No. 26) and Société Générale (No. 19) have already been sold to shareholders under Premier Jacques Chirac's ambitious plan to spin off 65 companies by 1991, and Cie Financière de Suez (No. 58) is expected to be next. This "capitalist revolution" reverses a long trend of nationalization and sets bankers' eyes a-twinkle in anticipation of a freer reign.

Deregulation was the buzzword in London too, where October's "Big Bang" shattered distinctions between stockbrokers and dealers and ended fixed commissions, among other changes. That meant hefty expenses for British banks arming for fiercer battle. London's leader on this list, National Westminster (No. 17), reported a $56-million pretax loss in investment banking, largely because of expenses for computers and staff needed to compete under the new rules.

Newcomers to the list include Ashikaga Bank (No. 95), named after the city where a line of shoguns ruled in feudal times, and compatriot Bank of Fukuoka (No. 97), the biggest commercial bank in western Japan. Sweden's Sparbankernas (No. 96, known abroad as SwedBank) tripled its operating income last year; it credits its growth to foreign currency loans, mortgages, and new corporate clients.

Bank Melli Iran (No. 69) is back after a two-year absence while the Iran-Iraq war rendered reliable figures unavailable. Iraq's Rafidain, No. 63 when it last appeared in 1984, is still missing in action. Dropped from the list because they're no longer big enough: Sweden's Svenska Handelsbanken (No. 89 last year) and Spain's Banco Hispano Americano (No. 95), Banco Español de Crédito (No. 99), and Banco de Bilbao (No. 100).

— Leslie Brody

RANKED BY ASSETS

RANK		COMPANY
1986	1985	
1	1	Dai-Ichi Kangyo Bank[7,8]
2	2	Fuji Bank[7,8]
3	3	Sumitomo Bank[7,8]
4	4	Mitsubishi Bank[7,8]
5	5	Sanwa Bank[7,8]
6	10	Industrial Bank of Japan[7,8]
7	7	Caisse Nationale de Crédit Agricole[9]
8	6	Banque Nationale de Paris[9]
9	14	Tokai Bank[7,8]
10	15	Mitsui Bank[7,8]
11	17	Norinchukin Bank[7,10]
12	12	Deutsche Bank[11]
13	8	Crédit Lyonnais[9]
14	19	Mitsubishi Trust & Banking[7,8]
15	16	Long-Term Credit Bank of Japan[7,8]
16	20	Sumitomo Trust & Banking[7,8]
17	9	National Westminster Bank
18	22	Taiyo Kobe Bank[7,8]
19	11	Société Générale[9]
20	13	Barclays Bank
21	21	Bank of Tokyo[10]
22	25	Mitsui Trust & Banking[7,8]
23	28	Daiwa Bank[7,8]
24	30	Yasuda Trust & Banking[7,8]
25	23	Dresdner Bank[11]
26	24	Cie Financière de Paris et des Pays-Bas[9]
27	29	Union Bank of Switzerland[7]
28	27	Hongkong & Shanghai Banking
29	31	Swiss Bank Corp.[7]
30	43	Toyo Trust & Banking[7,8]
31	40	Nippon Credit Bank[7,8]
32	18	Midland Bank
33	35	Westdeutsche Landesbank Girozentrale[11]
34	37	Commerzbank[11]
35	34	Banca Nazionale del Lavoro[9]
36	42	Kyowa Bank[7,8]
37	39	Bayerische Vereinsbank[11]
38	26	Royal Bank of Canada[13]
39	32	Lloyds Bank
40	41	Algemene Bank Nederland
41	36	Banco do Brasil[9]
42	45	Rabobank
43	51	Crédit Suisse[7]
44	44	Amsterdam-Rotterdam Bank
45	49	Saitama Bank[7,8]
46	33	Bank of Montreal[13]
47	47	Bayerische Hypotheken- und Wechsel-Bank[11]
48	52	Istituto Bancario San Paolo di Torino[9]
49	50	Bayerische Landesbank Girozentrale[7]
50	53	Deutsche Genossenschaftsbank[11]

THE 100 BIGGEST COMMERCIAL BANKING COMPANIES

COUNTRY	ASSETS[1]			DEPOSITS[2]		LOANS[3]	NET INCOME[4]	STOCKHOLDERS' EQUITY[5]	OFFICES[6]	EMPLOYEES
	$ THOUSANDS	PERCENT CHANGE IN U.S. DOLLARS	PERCENT CHANGE IN LOCAL CURRENCY	$ THOUSANDS	RANK	$ THOUSANDS	$ THOUSANDS	$ THOUSANDS		
Japan	251,533,301	51.84	8.25	183,566,900	1	145,933,839	436,359	4,272,310	380	20,024
Japan	219,924,600	50.88	7.57	161,926,239	2	121,705,578	447,759	4,830,904	298	15,403
Japan	214,399,190	52.58	8.78	159,419,605	3	119,402,229	534,536	4,974,668	265	13,989
Japan	209,304,645	54.85	10.40	149,783,388	4	116,158,562	437,802	4,410,249	238	14,680
Japan	200,339,313	54.65	10.25	147,896,981	5	115,217,629	416,957	3,898,711	280	15,341
Japan	167,147,204	69.65	20.95	130,173,009	6	93,864,056	336,051	3,237,480	31	5,447
France	156,295,970	26.28	7.27	129,386,232	7	116,411,228	223,887	4,359,871	10,160	73,228
France	143,606,020	15.85	(1.60)	121,763,010	9	114,325,409	435,307	2,864,203	2,578	58,625
Japan	142,485,151	51.53	8.03	111,900,790	12	83,874,616	206,999	2,507,366	244	13,296
Japan	140,147,716	52.33	8.60	104,348,792	16	82,055,031	234,160	2,566,142	238	10,787
Japan	139,375,130	61.39	14.19	124,212,613	8	63,624,195	92,220	733,682	39	3,147
W. Germany	133,726,588	37.94	8.43	120,358,172	10	104,886,178	486,219	5,049,669	1,410	50,590
France	133,691,709	19.10	1.17	115,171,444	11	114,873,353	262,987	3,166,586	2,591	54,557
Japan	132,478,581	59.19	13.49	110,525,520	13	64,030,243	257,670	1,743,900	60	6,229
Japan	125,773,294	44.22	2.82	98,642,371	19	76,831,480	186,398	2,422,773	28	3,357
Japan	124,548,591	51.98	8.35	110,133,061	14	52,854,836	258,802	1,727,444	64	5,998
Britain	123,529,312	17.97	14.98	107,868,182	15	106,203,335	900,641	6,865,457	3,754	94,000
Japan	120,949,666	54.44	10.11	91,237,324	22	74,113,411	132,598	2,004,218	361	14,130
France	117,431,577	19.43	1.45	99,030,369	17	88,853,197	384,615	2,655,720	2,236	43,655
Britain	117,046,340	24.25	21.11	96,826,522	20	98,547,705	715,819	5,514,900	4,184	110,000
Japan	115,879,206	41.46	0.09	58,731,120	40	58,670,417	213,956	2,261,312	295	13,569
Japan	115,491,681	58.01	12.65	98,916,067	18	60,990,489	189,989	1,445,922	59	5,859
Japan	105,450,398	52.39	8.64	88,293,132	23	52,896,566	123,019	1,392,342	196	9,478
Japan	103,851,655	60.31	14.29	85,898,471	24	50,348,967	139,979	1,008,552	61	5,108
W. Germany	102,323,666	32.72	4.32	94,758,429	21	81,248,866	225,787	3,305,381	1,425	36,769
France	94,380,586	28.55	9.19	70,252,470	31	71,045,946	242,571	2,097,224	1,189	28,000
Switzerland	94,279,726	39.27	9.12	80,367,681	26	75,978,956	431,531	5,383,297	264	19,990
Hong Kong	91,803,119	31.37	31.10	81,821,087	25	57,864,981	391,607	3,402,554	1,282	49,669
Switzerland	85,395,161	37.50	7.73	72,127,405	27	67,625,889	374,704	5,250,206	230	15,775
Japan	83,123,511	68.51	20.14	71,513,262	29	32,759,352	130,050	883,447	62	4,944
Japan	81,547,800	56.13	11.31	68,798,892	32	50,001,859	115,759	1,506,453	24	2,173
Britain	78,823,042	(6.07)	(8.45)	68,316,565	33	64,344,947	354,976	2,996,132	3,000	67,534
W. Germany	77,056,715	32.69	4.30	71,483,031	30	61,820,541	56,897	2,118,810	14	7,291
W. Germany	77,021,164	37.34	7.96	72,114,054	28	63,443,975	186,637	2,501,861	881	25,653
Italy	75,881,461	28.01	2.76	64,594,842	35	49,919,681	190,302	4,219,114	430	26,154
Japan	74,652,653	50.62	7.38	56,985,960	43	43,877,402	118,296	1,327,917	238	9,431
W. Germany	72,825,512	34.60	5.80	68,155,000	34	63,245,904	119,462	1,579,323	465	13,475
Canada	71,633,632	1.97	3.74	60,592,068	37	47,417,620	351,683	3,352,493	1,496	38,186
Britain	70,906,492	12.01	9.18	63,193,045	36	59,294,070	729,020	4,070,945	3,070	71,297
Netherlands	67,508,861	30.63	3.05	59,096,893	39	38,829,919	215,171	2,367,319	958	29,043
Brazil	67,192,574	19.68	(99.83)	26,528,395	77	55,077,945	277,571	5,461,569	2,285	118,281
Netherlands	64,298,594	34.41	6.03	59,187,345	38	46,747,936	279,678	3,554,835	3,459	31,967
Switzerland	64,275,957	49.34	17.01	54,748,378	44	48,383,132	314,813	3,781,562	201	14,060
Netherlands	64,007,825	31.69	3.89	57,804,373	42	33,304,028	169,034	2,152,819	813	23,489
Japan	62,941,283	41.94	1.19	50,039,326	48	37,055,219	101,885	1,321,160	204	8,520
Canada	62,696,524	3.97	5.78	53,848,541	45	39,173,360	253,895	2,621,265	1,220	32,988
W. Germany	62,576,409	35.94	6.86	58,343,313	41	55,790,049	106,375	1,650,494	491	12,490
Italy	60,085,138	41.55	13.63	46,153,846	53	26,604,777	427,465	2,337,959	665	17,845
W. Germany	60,029,332	35.67	6.65	48,864,391	49	46,765,194	67,478	1,422,407	5	4,196
W. Germany	58,201,736	37.28	7.91	53,237,024	46	44,766,457	74,985	1,232,347	24	4,859

THE 100 BIGGEST COMMERCIAL BANKING COMPANIES

RANKED BY ASSETS

RANK		COMPANY	COUNTRY	ASSETS			DEPOSITS		LOANS	NET INCOME
1986	1985			$ THOUSANDS	PERCENT CHANGE IN U.S. DOLLARS	PERCENT CHANGE IN LOCAL CURRENCY	$ THOUSANDS	RANK	$ THOUSANDS	$ THOUSANDS
51	38	**Canadian Imperial Bank of Commerce**[13]	Canada	**58,138,439**	**4.79**	**6.60**	**48,555,204**	51	**41,111,796**	**245,448**
52	62	**Shoko Chukin Bank**[7,9,11]	Japan	**57,563,422**	**54.02**	**8.98**	**51,599,322**	47	**47,212,953**	**26,979**
53	46	**Banca Commerciale Italiana**[9]	Italy	**55,582,076**	**19.47**	**(4.10)**	**48,747,349**	50	**37,239,806**	**267,719**
54	58	**Hokkaido Takushoku Bank**[7,8]	Japan	**54,413,385**	**42.83**	**1.83**	**41,436,987**	60	**29,686,971**	**65,078**
55	68	**Bank of Yokohama**[7,8]	Japan	**53,883,939**	**56.84**	**11.82**	**41,196,242**	61	**33,516,132**	**83,986**
56	57	**Monte dei Paschi di Siena**[9,11]	Italy	**53,622,646**	**35.43**	**8.72**	**44,686,858**	56	**42,278,948**	**261,116**
57	55	**Banco di Roma**[9]	Italy	**52,739,283**	**29.37**	**3.85**	**44,876,774**	55	**36,111,614**	**74,623**
58	56	**Cie Financière de Suez**[9]	France	**52,271,677**	**30.48**	**10.83**	**30,276,741**	71	**30,401,135**	**342,292**
59	63	**Générale de Banque**	Belgium	**51,872,385**	**40.58**	**12.50**	**48,058,727**	52	**36,559,675**	**117,824**
60	59	**Cassa di Risparmio delle Provincie Lombarde**	Italy	**51,047,274**	**31.30**	**7.72**	**42,293,146**	58	**22,813,746**	**141,609**
61	60	**Norddeutsche Landesbank Girozentrale**[9,11]	W. Germany	**50,175,606**	**32.57**	**4.21**	**45,901,401**	54	**39,120,300**	**16,813**
62	72	**Chuo Trust & Banking**[7,8]	Japan	**48,852,219**	**65.21**	**17.78**	**43,564,794**	57	**19,228,040**	**45,132**
63	54	**Standard Chartered Bank**	Britain	**47,772,821**	**14.66**	**11.76**	**40,493,301**	62	**40,777,497**	**208,732**
64	61	**Credito Italiano**[9]	Italy	**47,113,812**	**25.79**	**0.98**	**41,733,478**	59	**32,560,535**	**186,020**
65	48	**Bank of Nova Scotia**[13]	Canada	**46,035,610**	**3.03**	**4.82**	**38,368,230**	65	**31,080,124**	**241,850**
66	70	**Banco di Napoli**[7,9]	Italy	**45,130,715**	**48.84**	**19.49**	**38,388,465**	64	**18,675,720**	**36,553**
67	66	**Crédit Industriel et Commercial**[9]	France	**43,994,366**	**23.84**	**5.19**	**31,466,786**	67	**30,901,121**	**129,402**
68	78	**Zenshinren Bank**[7,10]	Japan	**42,597,618**	**72.32**	**21.93**	**39,686,785**	63	**23,294,003**	**120,664**
69	•	**Bank Melli Iran**[9,12]	Iran	**41,230,280**	**16.18**	**1.25**	**30,658,418**	70	**16,441,706**	**36,885**
70	69	**Groupe des Banques Populaires**	France	**39,643,720**	**30.06**	**10.48**	**26,664,576**	76	**22,822,801**	**122,440**
71	67	**Westpac Banking**[8]	Australia	**38,122,879**	**10.50**	**23.54**	**23,665,361**	86	**24,079,494**	**191,762**
72	65	**State Bank of India**[9]	India	**38,007,622**	**4.94**	**13.69**	**26,169,970**	79	**16,492,378**	**33,734**
73	64	**Toronto-Dominion Bank**[13]	Canada	**36,998,985**	**0.70**	**2.45**	**30,702,343**	69	**27,375,415**	**289,602**
74	73	**Hessische Landesbank-Girozentrale-**[11]	W. Germany	**36,660,253**	**30.61**	**2.67**	**29,689,419**	73	**27,009,522**	**24,692**
75	74	**Bank Brussels Lambert**[8]	Belgium	**36,141,386**	**31.73**	**2.05**	**31,869,410**	66	**12,402,646**	**56,851**
76	80	**Banque Française du Commerce Extérieur**[9]	France	**35,727,208**	**47.66**	**25.42**	**12,519,473**	99	**15,743,434**	**11,002**
77	71	**Australia & New Zealand Banking**[8]	Australia	**35,558,356**	**18.40**	**32.37**	**21,527,289**	88	**20,583,011**	**112,184**
78	76	**Nederlandsche Middenstandsbank**	Netherlands	**32,919,678**	**29.17**	**1.89**	**30,161,565**	72	**22,261,450**	**79,209**
79	79	**Creditanstalt-Bankverein**[9,14]	Austria	**32,815,453**	**34.87**	**6.35**	**31,250,796**	68	**18,159,027**	**32,540**
80	81	**Crédit Communal de Belgique**[14]	Belgium	**32,682,151**	**35.78**	**8.65**	**29,228,140**	74	**18,502,570**	**26,902**
81	90	**Crédit Commercial de France**[9]	France	**32,430,190**	**49.66**	**27.13**	**24,056,697**	85	**23,825,125**	**52,046**
82	85	**ASLK-CGER**[14]	Belgium	**31,180,078**	**38.39**	**10.74**	**26,458,262**	78	**30,298,926**	**62,053**
83	83	**Crédit Mutuel**	France	**31,154,461**	**33.12**	**13.07**	**24,460,615**	82	**23,766,434**	**155,938**
84	75	**Bank für Gemeinwirtschaft**[11]	W. Germany	**31,133,515**	**19.66**	**(5.94)**	**29,143,909**	75	**24,010,302**	**20,251**
85	91	**Hokuriku Bank**[7,8]	Japan	**30,655,860**	**44.26**	**2.85**	**25,062,339**	80	**21,689,608**	**57,708**
86	94	**Chiba Bank**[7,8]	Japan	**29,715,264**	**50.35**	**7.19**	**24,845,831**	81	**21,959,767**	**61,665**
87	84	**Skandinaviska Enskilda Banken**	Sweden	**28,341,937**	**22.75**	**9.24**	**20,623,350**	91	**16,557,781**	**46,990**
88	98	**Shizuoka Bank**[7,8]	Japan	**28,225,896**	**53.90**	**9.72**	**24,249,738**	84	**18,330,308**	**69,729**
89	97	**Joyo Bank**[7,8]	Japan	**28,094,720**	**51.98**	**8.35**	**24,375,497**	83	**20,086,174**	**67,753**
90	82	**Commonwealth Banking**[9,15]	Australia	**26,701,982**	**13.86**	**13.02**	**18,044,139**	96	**16,196,433**	**194,260**
91	88	**Banco Central**	Spain	**26,669,474**	**21.68**	**3.73**	**20,548,544**	92	**11,277,530**	**183,368**
92	77	**National Australia Bank**[8]	Australia	**26,621,045**	**7.34**	**20.01**	**12,843,381**	98	**15,881,358**	**199,354**
93	93	**Post-och Kreditbanken**[9]	Sweden	**26,365,012**	**26.37**	**12.46**	**21,291,575**	89	**13,686,733**	**35,748**
94	87	**Bank Hapoalim**	Israel	**26,190,270**	**19.21**	**18.17**	**17,951,699**	97	**21,188,323**	**16,705**
95	•	**Ashikaga Bank**[7,8]	Japan	**25,964,833**	**50.73**	**7.46**	**22,799,657**	87	**18,488,183**	**60,915**
96	•	**Sparbankernas Bank**	Sweden	**25,668,892**	**47.93**	**31.64**	**7,813,529**	100	**19,921,970**	**1,824**
97	•	**Bank of Fukuoka**[7,8]	Japan	**24,946,803**	**51.25**	**7.83**	**20,435,193**	93	**15,467,548**	**61,792**
98	96	**Banco di Sicilia**[9]	Italy	**24,781,012**	**31.61**	**5.65**	**19,435,052**	95	**14,894,515**	**16,148**
99	86	**Bank Leumi le-Israel**[11]	Israel	**24,038,591**	**8.39**	**7.44**	**19,684,740**	94	**13,966,514**	**2,970**
100	92	**Royal Bank of Scotland**[8]	Britain	**24,012,974**	**13.42**	**10.42**	**20,691,121**	90	**20,537,760**	**173,543**
		TOTALS		**7,382,083,386**			**5,949,187,149**		**4,755,535,417**	**19,532,760**

WHO DID BEST AND WORST

STOCK-HOLDERS' EQUITY $ THOUSANDS	OFFICES	EMPLOYEES
2,668,658	1,630	33,914
1,349,585	91	6,471
2,179,164	556	21,584
905,403	202	6,733
1,365,773	201	7,047
3,191,206	772	16,523
1,613,592	403	15,713
2,585,107	587	17,607
1,090,337	1,165	15,625
N.A.	515	13,980
867,793	215	6,100
320,978	53	3,793
1,920,282	836	34,000
1,651,005	496	17,200
2,199,886	1,194	26,215
843,466	502	13,600
1,025,501	1,400	26,892
555,163	17	950
2,284,255	1,850	20,158
1,102,556	1,842	28,575
1,620,099	1,954	45,323
499,771	11,171	280,023
2,369,487	964	20,211
725,430	6	2,825
711,789	1,000	11,817
364,048	30	2,889
1,714,846	1,657	39,018
977,215	481	11,948
965,954	338	9,835
566,435	1,377	3,205
571,561	424	12,504
887,986	1,100	8,905
1,608,500	4,308	20,296
1,071,848	292	8,950
825,695	178	5,279
894,901	162	5,235
499,926	348	8,461
1,224,270	191	5,678
995,828	148	5,193
1,340,179	1,277	33,364
1,148,537	2,836	24,592
1,377,031	1,653	23,711
327,845	140	4,515
778,627	348	8,315
851,293	136	4,336
99,985	1	1,196
845,183	196	4,832
1,071,883	328	9,159
865,801	416	13,037
1,386,613	864	18,609
206,721,552		2,360,517

RETURN ON STOCKHOLDERS' EQUITY

THE TEN HIGHEST

	RANK	
Zenshinren Bank	68	21.7%
Istituto Bancario San Paolo di Torino	48	18.3
Lloyds Bank	39	17.9
Banco Central	91	16.0
Banque Nationale de Paris	8	15.2
Sumitomo Trust & Banking	16	15.0
Mitsubishi Trust & Banking	14	14.8
Toyo Trust & Banking	30	14.7
National Australia Bank	92	14.5
Société Générale	19	14.5
THE MEDIAN		8.8%

CHANGE IN PROFITS

THE TEN BIGGEST INCREASES

	RANK	
Banco di Napoli	66	306.5%
Westdeutsche Landesbank Girozentrale	33	260.6
Chuo Trust & Banking	62	216.3
Mitsubishi Trust & Banking	14	181.7
Sumitomo Trust & Banking	16	180.7
Yasuda Trust & Banking	24	168.2
Société Générale	19	164.2
Toyo Trust & Banking	30	159.5
Mitsui Trust & Banking	22	150.7
Crédit Mutuel	83	149.8

THE TEN BIGGEST DECREASES

Bank Leumi le-Israel	99	95.8%
Banco do Brasil	41	79.9
Bank Hapoalim	94	75.6
Australia & New Zealand	77	54.1
Norddeutsche Landesbank Girozentrale	60	35.8
Westpac Banking	71	29.6
National Australia Bank	92	18.9
Skandinaviska Enskilda Banken	87	15.6
Norinchukin Bank	11	8.0
Canadian Imperial Bank of Commerce	51	8.0
THE MEDIAN		54.4%

ASSETS PER EMPLOYEE

THE TEN HIGHEST

	RANK	
Zenshinren Bank	68	$44,839,598
Norinchukin Bank	11	44,288,252
Nippon Credit Bank	31	37,527,750
Long-Term Credit Bank	15	37,465,980
Industrial Bank of Japan	6	30,686,103
Sparbankernas Bank	96	21,462,284
Mitsubishi Trust & Banking	14	21,268,034
Sumitomo Trust & Banking	16	20,765,020
Yasuda Trust & Banking	24	20,331,178
Mitsui Trust & Banking	22	19,711,842

THE FIVE LOWEST

Australia & New Zealand	77	$911,332
Westpac Banking	71	841,138
Commonwealth Banking	90	800,323
Banco do Brasil	41	568,076
State Bank of India	72	135,730
THE MEDIAN		$3,368,896

FOOTNOTES TO THE BANKS

● Not on last year's list.

N.A. Not available.

[1] Asset figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end, which is December 31, 1986, unless otherwise noted. Chuo Trust, Daiwa, Mitsubishi Trust, Mitsui Trust, Sumitomo Trust, Toyo Trust, and Yasuda Trust include holdings of major trusts in their assets.

[2] Deposit figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end. Figures for German banks include their own bonds; so do figures for Bank of Tokyo, Industrial Bank of Japan, Long-Term Credit Bank of Japan, and Norinchukin Bank.

[3] Loan figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end. Figures include loans to banks and money at call or available on short notice.

[4] Net income figures have been converted into U.S. dollars using the average rate in the official exchange market during the bank's fiscal year. Net income is after taxes and excludes minority interest.

[5] Stockholders' equity figures have been converted into U.S. dollars using the market rate at each bank's fiscal year-end. Equity is the sum of capital stock, surplus, and retained earnings.

[6] Includes head office, branches, and agencies.

[7] Parent company only.

[8] Figures are for fiscal year ended September 30, 1986.

[9] Government-owned.

[10] Figures are for fiscal year ended March 31, 1986.

[11] Excludes some subsidiaries more than 50% owned.

[12] Figures are for fiscal year ended March 20, 1986.

[13] Figures are for fiscal year ended October 31, 1986.

[14] Includes certain subsidiaries 50% owned or less, either fully or on a prorated basis.

[15] Figures are for fiscal year ended June 30, 1986.

THE BANKS BY COUNTRY

	1-50	51-100	Total	Largest Company	Assets $000	Rank
Australia	0	4	4	Westpac Banking	38,122,879	71
Austria	0	1	1	Creditanstalt-Bankverein	32,815,453	79
Belgium	0	4	4	Générale de Banque	51,872,385	59
Brazil	1	0	1	Banco do Brasil	67,192,574	41
Britain	4	2	6	National Westminster Bank	123,529,312	17
Canada	2	3	5	Royal Bank of Canada	71,633,632	38
France	5	6	11	Caisse Nationale de Crédit Agricole	156,295,970	7
Hong Kong	1	0	1	Hongkong & Shanghai Banking	91,803,119	28
India	0	1	1	State Bank of India	38,007,622	72
Iran	0	1	1	Bank Melli Iran	41,230,280	69
Israel	0	2	2	Bank Hapoalim	26,190,270	94
Italy	2	7	9	Banca Nazionale del Lavoro	75,881,461	35
Japan	21	11	32	Dai-Ichi Kangyo Bank	251,533,301	1
Netherlands	3	1	4	Algemene Bank Nederland	67,508,861	40
Spain	0	1	1	Banco Central	26,669,474	91
Sweden	0	3	3	Skandinaviska Enskilda Banken	28,341,937	87
Switzerland	3	0	3	Union Bank of Switzerland	94,279,726	27
West Germany	8	3	11	Deutsche Bank	133,726,588	12

ALPHABETICAL INDEX TO THE BIGGEST COMMERCIAL BANKING COMPANIES OUTSIDE THE U.S.

COMPANY	RANK
ASLK-CGER	82
Algemene Bank Nederland	40
Amsterdam-Rotterdam Bank	44
Ashikaga Bank	95
Australia & New Zealand Banking	77
Banca Commerciale Italiana	53
Banca Nazionale del Lavoro	35
Banco Central	91
Banco di Napoli	66
Banco di Roma	57
Banco di Sicilia	98
Banco do Brasil	41
Bank für Gemeinwirtschaft	84
Bank Hapoalim	94
Bank Leumi le-Israel	99
Bank Melli Iran	69
Bank of Fukuoka	97
Bank of Montreal	46
Bank of Nova Scotia	65
Bank of Tokyo	21
Bank of Yokohama	55
Bank Brussels Lambert	75
Banque Française du Commerce Extérieur	76
Banque Nationale de Paris	8
Barclays Bank	20
Bayerische Hypotheken- und Wechsel-Bank	47
Bayerische Landesbank Girozentrale	49
Bayerische Vereinsbank	37
Caisse Nationale de Crédit Agricole	7
Canadian Imperial Bank of Commerce	51
Cassa di Risparmio delle Provincie Lombarde	60
Chiba Bank	86
Chuo Trust & Banking	62
Cie Financière de Paris et des Pays-Bas	26
Cie Financière de Suez	58
Commerzbank	34
Commonwealth Banking	90
Creditanstalt-Bankverein	79
Crédit Commercial de France	81
Crédit Communal de Belgique	80
Crédit Industriel et Commercial	67
Crédit Lyonnais	13
Crédit Mutuel	83
Crédit Suisse	43
Credito Italiano	64
Dai-Ichi Kangyo Bank	1
Daiwa Bank	23
Deutsche Bank	12
Deutsche Genossenschaftsbank	50
Dresdner Bank	25
Fuji Bank	2
Générale de Banque	59
Groupe des Banques Populaires	70
Hessische Landesbank-Girozentrale-	74
Hokkaido Takushoku Bank	54
Hokuriku Bank	85
Hongkong & Shanghai Banking	28
Industrial Bank of Japan	6
Istituto Bancario San Paolo di Torino	48
Joyo Bank	89
Kyowa Bank	36
Lloyds Bank	39
Long-Term Credit Bank of Japan	15
Midland Bank	32
Mitsubishi Bank	4
Mitsubishi Trust & Banking	14
Mitsui Bank	10
Mitsui Trust & Banking	22
Monte dei Paschi di Siena	56
National Australia Bank	92
National Westminster Bank	17
Nederlandsche Middenstandsbank	78
Nippon Credit Bank	31
Norddeutsche Landesbank Girozentrale	61
Norinchukin Bank	11
Post-och Kreditbanken	93
Rabobank	42
Royal Bank of Canada	38
Royal Bank of Scotland	100
Saitama Bank	45
Sanwa Bank	5
Shizuoka Bank	88
Shoko Chukin Bank	52
Skandinaviska Enskilda Banken	87
Société Générale	19
Sparbankernas Bank	96
Standard Chartered Bank	63
State Bank of India	72
Sumitomo Bank	3
Sumitomo Trust & Banking	16
Swiss Bank Corp.	29
Taiyo Kobe Bank	18
Tokai Bank	9
Toronto-Dominion Bank	73
Toyo Trust & Banking	30
Union Bank of Switzerland	27
Westdeutsche Landesbank Girozentrale	33
Westpac Banking	71
Yasuda Trust & Banking	24
Zenshinren Bank	68

■ THE BIGGEST PRIVATE FORTUNE • WHY AIR TRAFFIC CO SS ■

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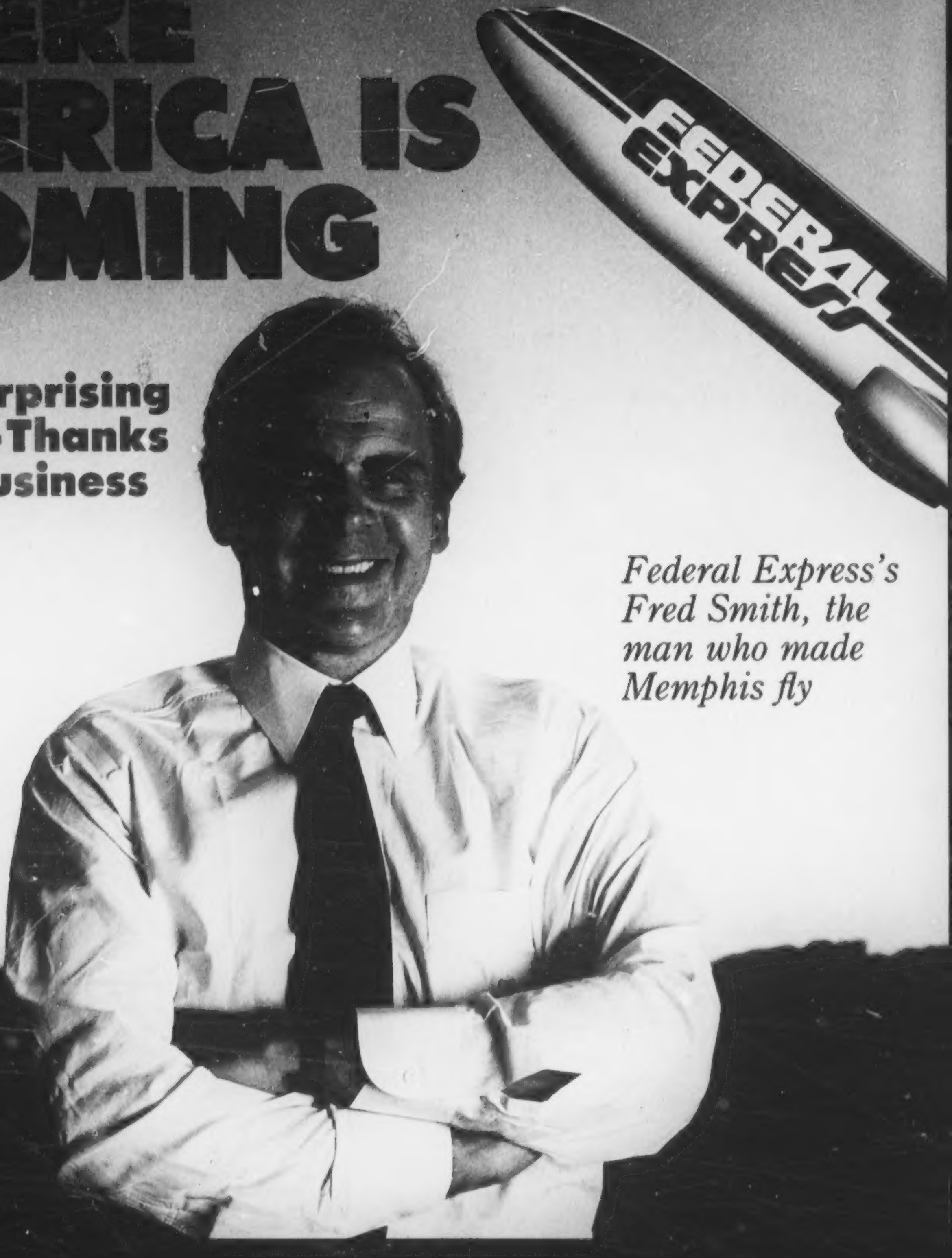
FORTUNE

WHERE AMERICA IS BOOMING

In Some Surprising Hot Spots—Thanks to Smart Business Leaders



Federal Express's Fred Smith, the man who made Memphis fly

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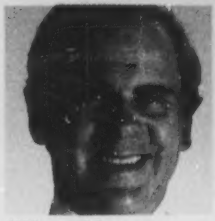
AUGUST 17, 1987

VOL. 116, NO. 4

FORTUNE



"Memphis now realizes that it is potentially just as great as Dallas or Atlanta."

PAGE 30

"Being an air controller is not the greatest training for being a manager."

PAGE 54

"So he paid a lot. He did it for his kids, for the prestige, for the franchise."

PAGE 60

If warnings by the Surgeon General were all the cigarette industry had to fear, it could just exhale and relax.

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"When two wheels are off the cliff, we start getting careful. With one wheel off, we step on the gas."

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"To my eyes the Japanese are 20 years behind."

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Growing Pains in the Sunshine State 40
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by Walter Kiechel III

Cover: Federal Express CEO Frederick W. Smith was photographed on top of his Memphis headquarters by George Lange.

IMI

CORPORATE FINANCE
ASSET MANAGEMENT
AND INVESTMENT BANKING

IMI is the leader in Italian corporate finance, specializing in medium and long term credit.
The IMI Group is also a leader in merchant banking, personal financial services and asset management. Because of this, our clients can take advantage of a unique combination of corporate financial services of the highest quality (including commercial banking, security and equity investment and capital market services).
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Consolidated Highlights at March 31, 1987

	(Dollars in millions)
Outstanding loans	21,959
Assets under management	18,538
Shareholders' equity	2,940
Allowances for losses	562
Net income	465

(1 U.S. $ = 1,286.9 lire)

ISTITUTO MOBILIARE ITALIANO
Head Office in Rome, Viale dell'Arte, 25

LETTERS

sions. It looks like the company's stockholders, not the rate payers, will be saddled with the $25-million costs for the year.

BARRY R. PHEGAN
President, Meridian Group
Consultants to Management
Berkeley, California

Doing Business in China

I was surprised and disappointed to read Louis Kraar's article "The China Bubble Bursts" (July 6). I spent considerable time with Mr. Kraar talking about the many positive things that are happening at American Motors' joint venture in China, Beijing Jeep Corp. (BJC). I explained that since our meeting in May 1986 with senior Chinese government leaders, all major and most minor problems had been resolved and BJC is now a very successful joint venture. To describe it as "a long-running horror show" is not accurate.

DON ST. PIERRE
President, Beijing Jeep Corp.
Beijing

FORTUNE *quoted Don St. Pierre extensively about the past troubles and present triumphs at BJC. The phrase he complains of appeared in a picture caption and was justified by his own account of what went on before he appeared on the scene.*

Correction

In FORTUNE*'s Service 500 (June 8), Pacific Mutual Life's increase in life insurance in force should have been $3,742,570,000.* ◼

Address letters to FORTUNE, Time & Life Building, Rockefeller Center, New York, N.Y. 10020. Letters may be edited for purposes of clarity or space.

INVESTOR'S SNAPSHOTS

EXPLANATORY NOTES

SALES in the Investor's Snapshots elsewhere in the magazine exclude excise taxes. Instead of sales, assets are shown for commercial banking companies, diversified financial companies, life insurance companies, and utilities, and operating revenues for transportation companies.
NET PROFIT includes any extraordinary items. Where applicable, sales and net profit for past quarters are restated to reflect mergers, acquisitions, or divestitures.
RETURN ON COMMON STOCKHOLDERS' EQUITY is calculated for the latest four quarters after subtracting dividends paid on preferred stock from net income. The five-year average is based on the last five full fiscal years.
PRICE/EARNINGS MULTIPLE is based on earnings per share for the latest four quarters.
TOTAL RETURN TO INVESTORS includes stock price changes and assumes dividends are reinvested on the date paid.

GROWING PAINS IN THE SUNSHINE STATE

Florida's service economy is bubbling, and its swelling population is younger than you think. But all those people are putting a severe strain on the budget.

■ *by Alex Taylor III*

JERRY VALENTE

God gets a little help *making a tree in Tampa Palms, a 9,000-acre housing development north of Tampa, where homes in the $60,000 to $1-million range are selling out.*

SUN AND FUN are two variables that do not ordinarily figure in economic computations. Yet they are key ingredients in the growth of the U.S.'s fourth-largest state. Thanks largely to its well-known climate and ambiance, Florida is adding new residents at the rate of 300,000 a year, making it the fastest growing of the ten major states. Only California, Texas, and New York, in that order, now have populations bigger than Florida's 12 million. And by the year 2000, Florida will have overtaken New York. Charles J. Zwick, chairman of Miami's Southeast Bank, boasts: "New York is losing people, Texas has its problems, and in California dry rot has set in. This is the best growth area in the U.S."

Most of Florida's new residents are relatively well-to-do. The older migrants come bearing capital gains from the house they sold back home, plus a pension and a Social Security check. "We get the wealthy who can afford to move and the healthy who are able to move," says economist Henry Fishkind of M.G. Lewis & Co., an Orlando investment firm. As a result, per capita personal income is growing almost 50% faster than the national average. Once they have unpacked, these newcomers demand services. Over the past four years the state has added 920,000 jobs, nearly twice the national average and second only to California. When the National Basketball Association decided in April to award its first new franchises in seven years, two teams were given to Florida, the Orlando Magic and the Miami Heat, and two more to the other 49 states.

Such a sonic boom is tough on a state. Today Florida suffers from overburdened highways, overcrowded schools, inadequate social spending, and potentially perilous shortages of fresh water and facilities for sewage treatment. Moreover, residents display no noticeable sense of urgency about dealing with the state's problems. "We have all heard complaints about lack of infrastructure, but nothing has happened," says real estate developer Kenneth M. Good of Tampa. "If you don't plan for growth, it doesn't matter, because it is going to come anyway." Indeed, immigrants keep trekking across the state border at the rate of 893 per day.

To understand why so many people are moving to Florida, think of it as Texas with water or California without affectations. Floridians enjoy an easygoing, outdoor-oriented life, in which softball, swimming pools, and boats play an outsize role. Air conditioning tames the fierce summer heat, and the winters are temperate. Some 85% of the residents live within 20 miles of either the Atlantic Ocean or the Gulf of Mexico. While Florida still has half again as many oldsters as the average state—18.5% of the population is over 65—it is getting a vigorous influx of younger people. Those aged 25 to 44 represent 30% of the immigrants.

Living is cheap. Florida is the second-largest state east of the Mississippi River after Georgia, and land is abundant and inexpensive. Houses with two bedrooms are available for less than $70,000, and $140,000 buys a comfortable three-bedroom ranch with a swimming pool in the backyard. The constitution bans a state income tax. Estate taxes are among the lowest in the U.S. But the 5% sales tax has been extended to services including national advertising and, as a result, the tax is raising more ruckus than revenue ($770 million expected in fiscal 1988).

Opportunities are plentiful. While the rest of the U.S. economy has just chugged along at an annual growth rate of 3.3% since 1982, Florida has hummed at 5.45%. Says Michael R. Reeves, president of a Tampa plumbing concern: "With people moving in, there is a need for more homes, offices, and malls to take care of all their needs. If you want to get out there and hustle, you can make it." Reeves knows. After growing up in Tampa's housing projects, he started his own plumbing company six years ago with a $600 stake. Now he has ten employees and expects his revenues to hit $500,000 this year.

Reporter Associate *Darienne L. Dennis*

Take The Good Life
HOLIDAY
Of Orlando
NATIONS
LARGEST RV
SUPER STORE
RV Rental
COLEMAN DELTA

JONATHAN BURNETTE

The sunny Orlando economy *helped Newton Kindlund build a $27-million-a-year business in nine years.*

Entrepreneurs like Reeves abound, and Florida ranks first in new business starts. In the late 1960s, Newton C. Kindlund, 47, headed south for Orlando from Lansing, Michigan, to make a fresh beginning. He went broke with his first business, making custom motor homes. But he got in gear when he bought a recreational-vehicle dealership in 1978. "RVs are a 12-month-a-year business here, compared with only a few months a year up north," says Kindlund. "Central Florida is a big reason for my success." This year he expects to gross $27 million, up 30% from 1986.

FLORIDA'S VITALITY is at its most vigorous in Orlando. Located halfway down the peninsula, Orlando is the state's fourth-largest metropolitan area and its fastest-growing one. Though the population increased 4.7% last year, to 914,000, the number of available jobs jumped 7.7%—more than twice the national average. Orlandoans, as they call themselves, are proud of their growing laser instrument industry and Martin Marietta's aerospace operations. But the real spur to the area's growth has been Huey, Dewey, Louie, and the rest of the gang at Walt Disney World, which opened 20 miles away in 1971. Disney has boosted ticket prices three times in the past 12 months to $26 per day without making a noticeable impact on the theme park's popularity. On Orlando acreage that is twice the size of Manhattan, Disney is building two separate parks: Typhoon Lagoon, with water rides, and a movie studio where tourists can watch films being made.

Owing to Disney and such competing parks as Sea World and Boardwalk and Baseball, both owned by Harcourt Brace Jovanovich, Orlando has captured an enormous amount of vacation and convention travel. The country's 46th-largest metro area, it has nearly 60,000 hotel rooms, behind only New York and Los Angeles. So far in 1987 the hotels have been 87% filled, vs. an industry norm of 64%. The Orlando airport, which was designed to handle 12 million passengers by 1990, passed that mark in 1986 and is now embarked on an ambitious expansion.

Landlocked Orlando is unique among Florida's growth areas. More typical is Tampa-St. Petersburg-Clearwater on the Gulf Coast, one hour's drive to the west and the largest metropolitan area in the state, with a population of 1.9 million. The location of Florida's busiest port, television's Home Shopping Network, and a Busch Gardens amusement park, the Tampa area is drawing service firms and light manufacturing. A study by Cushman & Wakefield, a commercial real estate firm, ranked Tampa third in the U.S. as chief executive officers' choice of an office address, especially for its pro-business climate and access to raw materials (Atlanta and San Diego were first and second).

Residents speak of Tampa as "the next great city." Couples queue up for tract houses in developments like Tampa Palms, a 9,000-acre project built on filled-in marshland, where houses cost $60,000 to $1 million and neighborhoods have names like Cambridge, Canterbury, and Coventry. Developer Kenneth Good is typical of the enthusiastic, pro-growth local sentiment. "What's happening here is like what happened to Dallas. In ten years you won't be able to recognize Tampa." The area is expected to add 397,600 new jobs by the year 2000, more than either Philadelphia or San Francisco.

Most of those jobs will come in two of Florida's biggest businesses, real estate and tourism. Floridians like to tout the state's nascent capabilities as a manufacturing center, especially in high technology. But while good-paying factory jobs are growing in absolute numbers, they are shrinking as a percentage of the state's work force. "We are the king of low-paid, tourist-related service and retail jobs," says economist Henry Fishkind. "Our factories are hotels and condos, and our factory workers work there."

Only 11.3% of Florida's wage earners hold jobs in real factories, vs. 19.4% for the rest of the U.S. Though Florida is a right-to-work state with an average wage of $8.02, nearly $1 an hour less than elsewhere in the country, its remote location and a shortage of natural resources make it an improbable site for anything but light assembly of such products as electronics and aerospace components. Says Florida Commerce Department Secretary Jeb Bush, son of Vice President George Bush: "Some industry needs to be centrally located. We're not going to get auto plants to locate in Florida." While high-tech employment is growing and Florida ranks sixth in the nation for these jobs, firms tend to do their research and development work outside the state. One reason is that Florida's university system, long starved for tax money, is widely viewed as substandard.

The state is just developing as a back office for businesses such as banking, finance, and insurance that generate jobs for programmers and computer operators rather than for busboys and housekeepers. Citibank, J. Walter Thompson, and Time Inc., publisher of FORTUNE, all have located data processing centers in Tampa. Fort Lauderdale, on the Atlantic Ocean side of the state, has become known as the Heavy Metal Coast because that's where American Express processes chits from gold and platinum cardholders. But corporate headquarters have been slow to follow the computers. Only seven FORTUNE 500 companies are based in the state; by comparison, eight are in St. Louis, which has one-thirtieth the population of Florida.

No one comes to Florida for the picturesque countryside. It is swampy and pancake flat. Take an elevator to the 36th floor of an office building in Miami (there are four that high) and you are at the steepest point on the physical landscape. Much of the land is saturated with water and has to be drained and filled before it can be built upon. The resulting disruption of the ecology helps breed an exotic population of insects that includes fire ants, Medflies, and flying cockroaches.

The state's panhandle shape divides Florida politically and socially. Residents of the northern part, known as "porkchops," associate with neighboring Alabama and Georgia more than with South Florida, home to the snowbirds and retirees. A mixture of backgrounds and races creates what *The Almanac of American Politics* calls "especially chaotic and unstable politics." Florida's blacks, 14% of the population, have been outdistanced economically by the Cubans, who are far more successful at capitalism. In Miami's Dade County, where 43% of the residents are Cuban, more than 400 have risen to vice presidencies or above in the city's 71 banks.

Florida did not begin to attract settlers until the late 19th century, and as recently as 1950 it was only the 20th-largest state. It still has some growing up to do. It ranks high in alcohol consumption, moonshine seized, and UFO sightings. In the past the freewheeling business climate has made it a petri dish for fraud. Florida has been a hotbed of stock swindlers, and only two years ago E.S.M. Government Securities, a Fort Lauderdale securities broker, collapsed, owing customers about $320 million. Its officers were indicted for conspiracy and mail fraud. Florida real estate salesmen rank with used-car dealers as symbols of mendacity. Tales of underwater building lots, flimsy high-rise condominiums, and high-pressure sales tactics are part of the state's lore.

REAL ESTATE SPECULATION—of the legal kind—seems to be second nature to Floridians. A spurt of office and retail construction has produced vacancy rates averaging 24% in the state's six largest cities, about eight percentage points above the national average. In suburban Boca Raton, north of Miami, the commercial vacancy rate is a stunning 39.6%. Florida has suffered several real estate shocks, most recently in the early 1980s, when homeowners just mailed their keys to the bank as their balloon mortgages came due, and developers, stretched tighter than the skins of their high-rise condominiums, went broke. This time nobody seems alarmed. The empty buildings are regarded merely as excess inventory that will be quickly absorbed.

But serious overbuilding may be afflicting Miami, Florida's second-largest metro area, where more than a quarter of the office space is currently vacant. The oceanfront is dotted with empty apartments. Unfortunately, Mi-

COMPARABLE COSTS OF CITY LIVING	NEW YORK	CHICAGO	DETROIT	TAMPA	ORLANDO
STATE TAXES (incl. city and county)					
Sales	8.25%	8.0%	4.0%	5.0%	5.0%
Income	2.0%-13.5%	2.5%	4.6%	none	none
Gasoline (per gal.)	$0.08	$0.13	$0.15	$0.10	$0.10
Cigarettes (per pack)	$0.21	$0.20	$0.21	$0.21	$0.21
Alcohol (per gal.)	$4.09	$2.00	none	$6.50	$6.50
ENERGY					
Electricity (per 500 kwh)	$60.25	$45.11	$44.25	$38.00	$37.08
Fuel oil (per gal.)	$0.91	$0.88	$0.91	$1.01	$0.99
Natural gas (per 40 therms)	$33.27	$20.25	$27.63	$20.15	$20.15
Gasoline (pump price per gal.)	$0.99	$1.10	$0.87	$0.86	$0.81
HOUSING					
Average rent, one-bedroom apartment	$1,300 (Manhattan)	$700	$415	$300	$339
Median price, existing single-family home	$169,400	$85,700	$64,300	$59,800	$73,600

ILLUSTRATION BY JOHN PIRMAN

No Charge for the Sunshine Either

Taxes and housing in Florida are bargains for residents of New York, Chicago, and Detroit, who make up the bulk of the state's immigrants. Energy savings are smaller, but who needs heat?

ami has a number of other problems that other Florida cities do not share. Because of its large Hispanic population, its position as the leading financial and trading center for Latin America, and reputation for hip international culture, it is sometimes described as the city of the future. But Miami is still having trouble coping with the present. When some Latin economies sagged along with oil prices, so did Miami's, and now its labor force is growing only one-quarter as fast as Orlando's. The attractions of Orlando and Tampa have siphoned off tourism. Publicity about crime, especially drug trafficking, lures neither visitors nor settlers. In 1986 the Miami division of the Drug Enforcement Administration seized 72% of the cocaine confiscated nationwide. Cushman & Wakefield ranks the city's business climate as one of the worst.

Miami appears to be the one bruise on an otherwise glorious orange. Planners are projecting giddy growth for Florida well into the next millennium. The number of jobs is forecast to grow 60% by the year 2000. Booms, of course, do not last forever. California's growth slowed when the state imposed strict land-use laws; Texas's fortunes took a dive when oil prices tumbled. What could deflate Florida's rise?

HIGH ON THE LIST is a spike in oil prices. Tourism slumped noticeably in 1982 when the price of oil peaked. A second surge would shut down recreational travel and dampen the tourist economy on which the state so heavily depends. Another obstacle would be a spurt in interest rates. Northerners planning to head south would have a harder time selling their homes and would find Florida residences more expensive to support.

Probably the biggest barrier to Florida's bright future is Florida itself. After having sold itself cheap to attract residents, it now finds itself with a huge bill coming due. George M. Steinbrenner III, better known for firing managers of his New York Yankees than as chairman of American Ship Building, located in Tampa, is one of the few worriers. "I look at Florida like a Norman Rockwell drawing. It is the kid who grows too fast—whose pants are too short and whose shirt is popping open across his chest," says Steinbrenner, who moved to the state from Cleveland 13 years ago. "We have had too much too soon; gone too far too fast. We could wake up in the next decade and say to ourselves, 'My God! What happened?' "

A committee composed of business and political leaders and chaired by Southeast Bank Chairman Zwick reported in February that Florida has "jammed highways, polluted natural resources, struggling schools, poorly paid teachers, teeming jails, neglected children . . . and a declining quality of life." Every day, according to the report, Florida needs two miles of new highways, two new classrooms, two new teachers, two more police officers, and another jail cell.

The estimated cost to state and local governments of providing these services is $52.9 billion. That is a lot of money for a state whose annual budget is only $18.5 billion. Floridians are dismissive. "That report was never new news, and now it is old news," says Peter S. Rummell, president of Disney Development, the real estate arm of Walt Disney. "People know you've got to pay for the parade. But it is going to be a tough political fight" to raise more money.

Some lip service goes to the need for controls on growth, but businesses count on ever-increasing numbers of customers, and politicians like to see their state loom ever larger in the national consciousness. Nobody wants to stop the parade, and it usually is easier to find economic rationales for a project than to cancel it for "quality of life" reasons. So Floridians adapt. They have adjusted to the effects of growth despite their gripes about traffic jams and commercial sprawl. Only a crisis would cause the state to change, and none looms—yet. Years ago someone hung out a sign on Florida saying, "Come on down." The sign is still up. F

BRIAN SMITH—MIAMI HERALD (2)

The two sides of Miami: *Miami Beach's art deco district, lavishly restored down to the vintage car, and Little Havana, across the bay, home to the city's Cuban immigrants.*

■ INSIDE APPLE • STOCKS: GETTING SCARY • PEREL N ■

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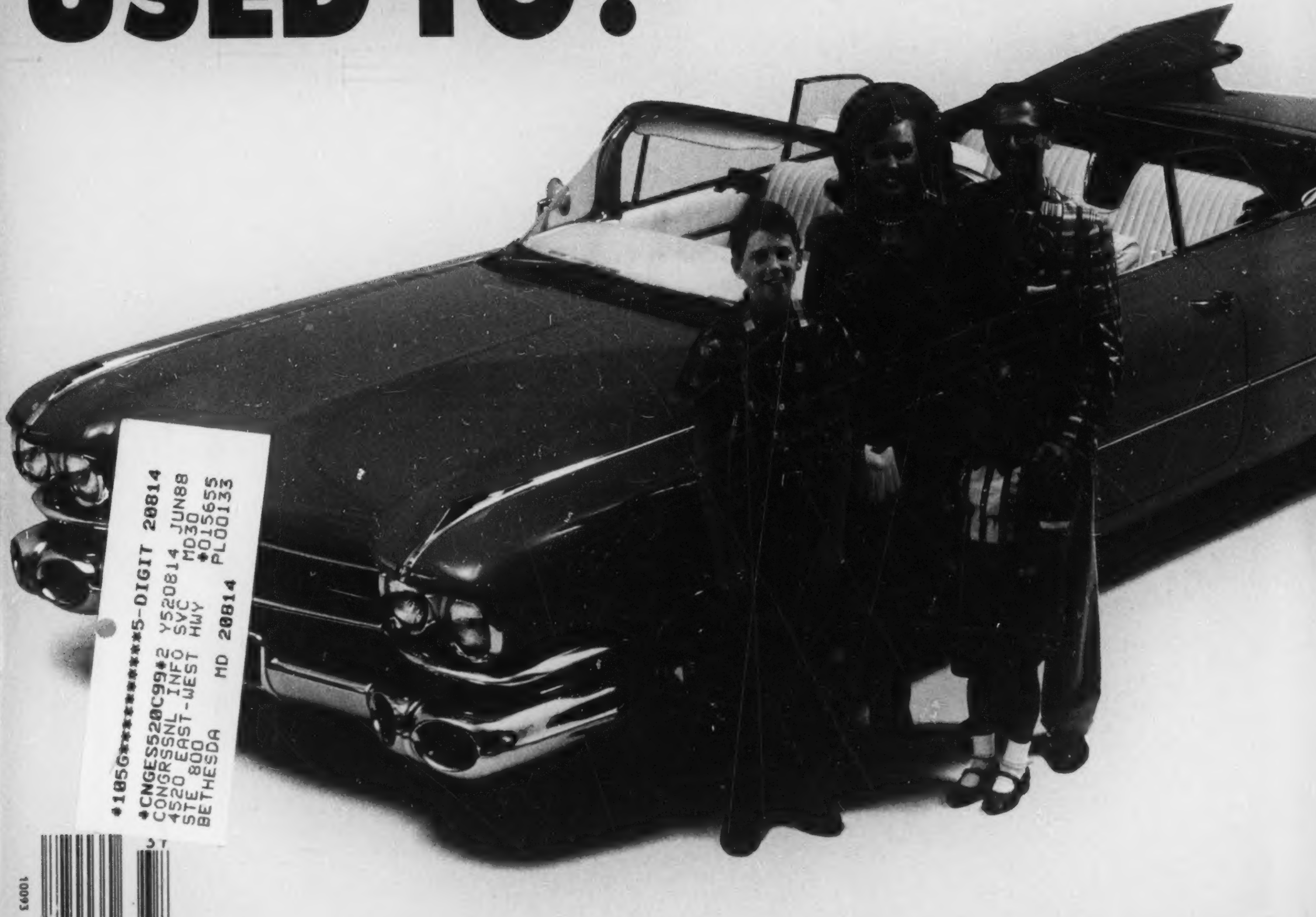
FORTUNE

DO WE LIVE AS WELL AS WE USED TO?



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FORTUNE

"My parents' first house didn't even have a septic tank. The basement wasn't cement—it was dirt."

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"He is cash-flow driven and wants companies that have strong brand names. The blade business is a cash machine."

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"Just as commercial bankers are fighting to repeal Glass-Steagall, investment bankers are doing the things that got it enacted."

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"People who feel you're stepping on their turf ask, 'Who the hell is this bitch?' "

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"It's come to my attention that you'd like to throw me out of the company, and I'd like to ask you if that's true."

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"Let's go out to dinner to discuss your prospects for promotion."

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By ripping apart and rebuilding the old supercarrier *Independence,* the Navy hopes to double its life and save taxpayers over $2.5 billion. *(A picture portfolio)* *by Thomas Moore*

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The high cost of sexual harassment. Ms. Lavoom, and her lawyer, may not agree that you were just kidding around. *by Walter Kiechel III*

Cover: Yesterday's dream car, a 1959 Cadillac convertible, photographed for FORTUNE by Kenneth and Carl Fischer.

Korea: democracy's economic impact

■ Now that **Hyundai**, South Korea's second-largest industrial group, has agreed to recognize an independent labor union, the question becomes: Will democracy slow down the Korean economic machine? The answer is probably, but not much.

The government, fresh from its stunning decision to hold direct elections, played the unusual role of peacemaker between angry Hyundai workers and the conglomerate that had locked out 20,000 demonstrators. The surprise deal raised hopes for a quick end to walkouts that had spread from heavy industries to electronics companies and even taxi drivers.

Up to now the government had barred strikes and stifled labor unions in its pursuit of economic growth. With an average manufacturing wage of $1.75 an hour, lower than that of those other industrializing Asian tigers—Taiwan, Hong Kong, and Singapore—Korea has become the world's leading exporter of ships, shoes, and microwave ovens.

If companies grant pay increases of 10% to 15%, the Korea Development Institute, a highly regarded government research outfit in Seoul, figures that the economy would grow only 5.5% in the second half of the year, vs. 15% in the first six months of 1987. But other experts call the forecast unnecessarily gloomy. John T. Bennett, president of the Korea Economic Institute, a Washington-based research firm, thinks 10% growth in the second half is not out of the question. "The stimulus of bigger wages and victory might bring those demonstrators back all fired up," he says. "If a guy thinks he's going to get a bigger hunk of the pie, he wants a bigger pie."

Motorcycled and menacing, workers prepare to protest against Hyundai.

SANDRO TUCCI—TIME

The never-sleeping precedent setter

■ When **Citicorp** became the first of many big banks to put aside huge reserves against possible losses on Third World loans, taking a $2.5-billion write-down in the process, Wall Street applauded. Since the May announcement, the stock price of the largest U.S. bank has climbed from about $50 a share to $67. But when Citi struck again, saying it would replenish some of that capital with a $1-billion stock offering this fall, the stock dropped. Financial analysts worried that an equity offering could dilute the stock and hurt earnings per share. Many Citi watchers had expected the bank to rebuild capital through asset sales and retained earnings. Did an equity offering mean the bank might not meet the earnings estimates it made last spring?

More likely, John Reed, Citicorp's chairman, is just taking advantage of the market. All the companies to issue $1 billion or more of stock have done so while the five-year-old bull has raged; five of the six launched stock offerings this year or last (see chart). By floating 17 million new shares, Citicorp may glut the market, leaving most competitors—many of which also took dramatic write-downs to cover potential Third World loan losses—high and dry. Says Cheryl Swaim, banking analyst with Oppenheimer & Co., a New York investment house: "There's a question of how much bank equity the market can absorb. Citicorp was smart to move early."

DAVID BURNETT—CONTACT

Trend-setter Reed

Which banks might follow Citicorp this time? Not **J.P. Morgan** or **Bankers Trust**. They have healthy supplies of capital. You can also forget **Manufacturers Hanover** and **BankAmerica**. They are too hard-pressed financially to sell big stock issues now. Instead, these banks will probably rely on other methods—asset sales, for example—to raise capital. But maybe **Chase Manhattan** and **Chemical** could jump into the new-issues market. Both need money, mainly to cover loan-loss reserves. But like Citi, they are in sound enough health to attract plenty of investors.

CORPORATE ISSUER	STOCK OFFERING BILLIONS	YEAR
AT&T	**$3.263**	**1981-83**
Consolidated Rail	**$1.645**	**1987**
Henley Group	**$1.190**	**1986**
Coca-Cola Enterprises	**$1.178**	**1986**
Occidental Petroleum	**$1.157**	**1987**
Citicorp	**$1.000**est.	**1987**

SOURCE: IDD INFORMATION SERVICES

If the shoe fits . . .

■ Italy has long been known for its fine, fashionable footwear, the kind Americans love to buy. But now the shoe seems to be on the other foot. Trendy Italian men from Milan to Montepulciano are sporting American-made outdoor shoes like Timberlands and Sperry Top-siders, as well as casual classics from Sebago.

Barely a footnote in the trade story ten years ago, sales of American shoes to Italy jumped 23% in 1986 to 1.2 million pairs out of total U.S. exports of nine million pairs, according to Footwear Industries of America, a trade group. During the same period 65 million pairs of Italian shoes marched into the U.S. But the American niche in Italy is lucrative. The New Hampshire-based **Timberland Co.** sold

DO WE LIVE AS WELL AS WE USED TO?

Vastly better, by almost every material measure. That's true for rich and poor, black and white, old and young. Yet we pine for the good old days, when Dad supported Mom and the kids on one paycheck and the split-level cost the same as today's new car. Here's why. ■ *by Sylvia Nasar*

WE SUSPECT the grass was greener. Life sweeter. The breaks better in the golden age after World War II, when the postwar boom was on and our parents were young. But as Jackie Gleason said, "The past remembers better than it lived."

It does. The average American has never had it so good. By almost any measure of health and wealth, if not wisdom, we are demonstrably better off now than in the palmy Fifties and Sixties. And that goes for just about any group you would care to name: the middle class, the poor, baby-boomers, old people, black people, women.

In some respects, despite oil shocks, recessions, and higher inflation, the gains in the Seventies and Eighties came as fast as or faster than in the two preceding decades. Our incomes are up, and so was our net worth even before the bull market turned into a stampede. We have more opportunity—to go to college, land a good job, start a business. We can choose among more things to buy, and more important, we have more choices about how we live. Arguments to the contrary notwithstanding, inequality has diminished. In the land that stands for opportunity, we are less prisoners of economic class than we ever were before.

REPORTER ASSOCIATE *Alan Farnham*

Okay, you ask, if our purses are heavier, why aren't our hearts lighter? According to pollster Louis Harris, fewer Americans were satisfied with their economic circumstances in 1986 than in 1956. And fewer said that they were happy. One reason is that pay has been rising more slowly than during the boom times of the Sixties. Another is that higher incomes have often come at a price: More wives are working. We are also bruised from the epic battles of the Eighties—the battle with double-digit inflation, won at the price of deep recession, and the battle to make American industry more efficient and competitive, which is still producing casualties and anxiety.

In addition, we are victims of our expectations. "Kids nowadays want more than we did when we were their age," says Burdette Jenks, 65, a retired Pacific Gas & Electric troubleshooter who lives in Woodland, California. "Like a home of their own and all the latest things. They're impatient. TV was out four or five years before we bought it."

Finally, in case you might have forgotten, money does not necessarily buy happiness.

If we look back two to three decades without nostalgia, we can see striking differences in how we live. To show trends clearly, comparisons with the past in this story are generally made in dollars of equal purchasing power, adjusted for intervening inflation.

Prices have nearly quadrupled, and taxes have been taking a bigger bite since the Fifties, but the average American commands *twice* as much buying power today as in 1952. And per capita income after taxes has been rising in recent years—by a third since 1970, and by a tenth just since 1980. The rate of growth since 1970 is only about half the Sixties' pace, but it matches that of the Fifties.

THE TYPICAL AMERICAN family's income before taxes, as measured by the Census Bureau, was half again as high in 1986 as in 1960, $29,458 vs. $19,500. All types of families got richer. Compared with their counterparts in 1960, households headed by young adults in their late 20s and early 30s—the baby-boomers whose scramble to find their places in a crowded job market has inspired so much hand-wringing—earn 25% more. For women

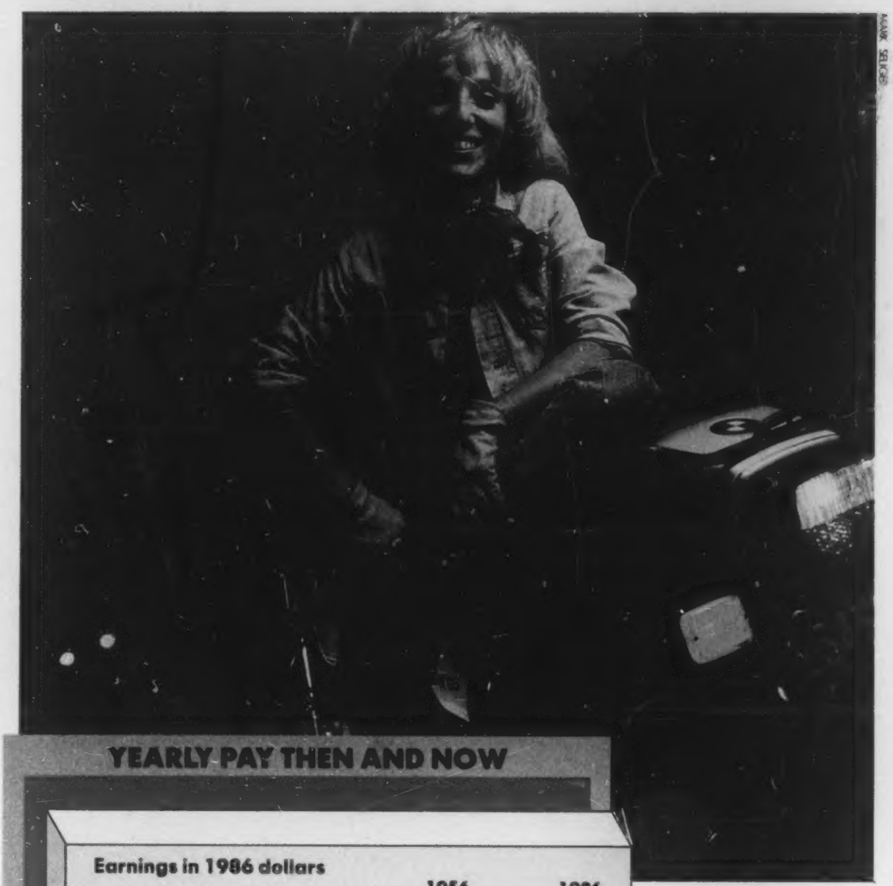
who are raising families single-handedly, the increase is 33%. Couples with two paychecks, not surprisingly, are doing best: Their incomes are up 60%. But even when the wife stays home, the sole breadwinner brings back 34% more.

The census numbers understate the rise in living standards. Families are smaller now than they were in 1960, so they have more dollars to spend on fewer folks. The mix of families has shifted since the early Seventies toward households headed by young adults and old people, who typically have lower incomes than the middle-aged. The change depressed the average. Also missing are significant gains in noncash income, which the Census Bureau doesn't count. Employee benefits like health insurance and pension funds are twice as large a share of total compensation as they were 35 years ago.

What does a 50% improvement in family incomes mean to us? According to a recent Roper poll, most Americans believe it takes an average family $20,000 to make ends meet, $30,000 to live moderately well, and $50,000 to achieve the American dream. By these yardsticks the typical family was barely getting by in the golden past but now lives in reasonable comfort. And one in five families now, vs. fewer than one in 20 then, have made the dream come true.

But wait, cry some economists, these aggregate numbers hide a widening cleavage between rich and poor. And indeed, census data suggest as much. Between 1960 and 1986, the share of total income earned by the top two-fifths of families grew, while everybody else's share declined. But the shifts have been slight. Income distribution is still about the same as it was at the end of World War II. And rather than displaying troublesome inequalities, the recent shifts—like those in income—most likely reflect changes in the mix of families.

At the same time, a family's chances of


MARK SELIGER

Economic Cyclist

Though she and her fellow secretaries make much more than they used to, Janet Kramer, 34, of New York says her parents' generation had better prospects. She's got big hopes, however. She plans to start her own business —a school that teaches women to ride motorcycles. Some pessimist.

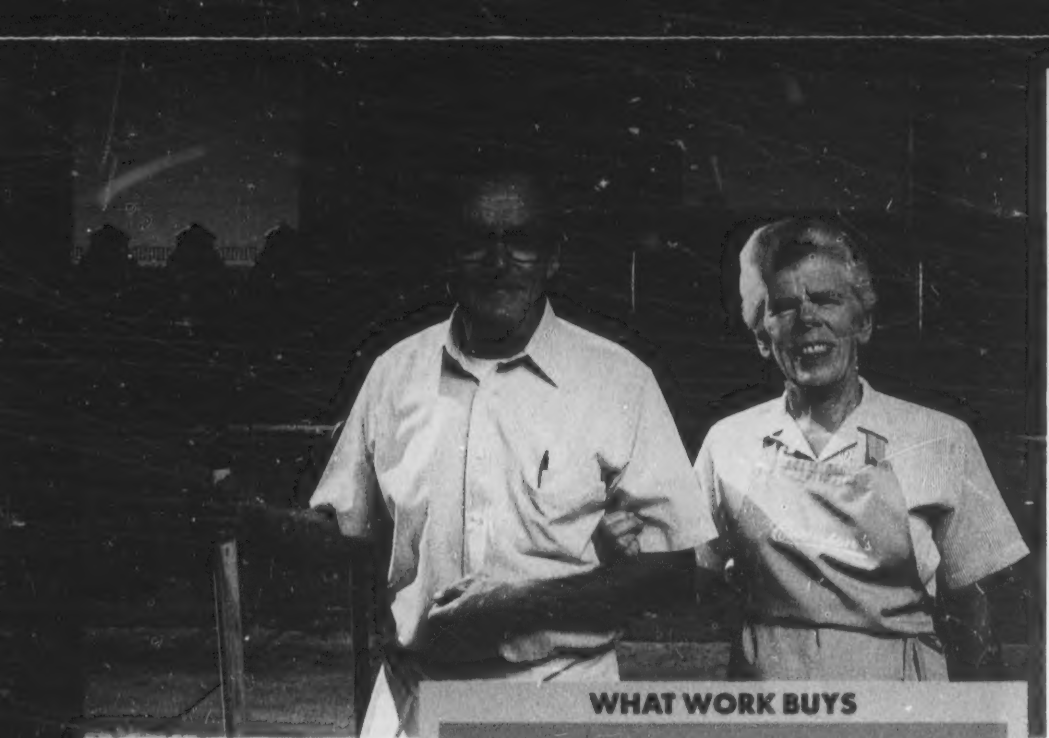
YEARLY PAY THEN AND NOW

Earnings in 1986 dollars	1956	1986
G.M.'s chief executive	$2,641,000	$1,425,000
All FORTUNE 500 CEOs	$402,110*	$931,800
A. T. & T. middle manager	$30,350	$41,000
Average plant manager	$75,880	$65,000
School teacher	$15,940	$25,450
Gov't. worker (state or local)	$15,210	$25,830
Private secretary	$16,390	$23,190
Service worker	$12,780	$17,643
Steel worker	$20,530	$31,360
Factory worker	$15,560	$20,600
All employees	$16,000	$19,750

* FORTUNE estimate

CHARTS BY JOE LERTOLA

KENNETH AND CARL FISCHER



ED KASHI

American Classics

Nancy and Eldon Cranston of Woodland, California, both in their 60s, own a hardware store that's half bridal boutique. These purveyers of paint and crystal have prospered by selling lots of things that customers can buy with ever less work. They are looking forward to retiring in the next year or two to a dream house they're building on "the most beautiful lot on Mount Shasta that you ever saw."

WHAT WORK BUYS

	1956	1986	Percent Change
Average hourly wage in 1986 dollars (nonfarm workers)	**$6.80**	**$8.80**	**30%**
Work time required to buy:			
Kitchen range	**125.1 Hrs.**	**41.4 Hrs.**	**-67%**
Man's suit	**67 Hrs.**	**30 Hrs.**	**-55%**
Visit to doctor	**2.3 Hrs.**	**3 Hrs.**	**30%**
Car tune-up	**10.4 Hrs.**	**9.2 Hrs.**	**-11%**
Car insurance	**33.6 Hrs.**	**50.3 Hrs.**	**50%**
Gallon of paint	**3.6 Hrs.**	**2.4 Hrs.**	**-33%**
Six-pack of beer	**39 Min.**	**21 Min.**	**-46%**
Movie ticket	**27 Min.**	**29 Min.**	**7%**
Chicken (fryer)	**15 Min.**	**6 Min.**	**-64%**
Dry cleaning (1 dress)	**15 Min.**	**6 Min.**	**-11%**
Man's haircut	**46 Min.**	**39 Min.**	**-11%**

moving up the income ladder show no signs of diminishing. The Michigan Panel Study of Income Dynamics has tracked the fortunes of 5,000 representative families from 1968 to 1982. Greg J. Duncan, an economist at the University of Michigan, concludes that younger Americans' chances of trailing their predecessors by a rung or two rose slightly during the Seventies because of the crowding, but that upward mobility increased for the majority, meaning those 35 and older.

And what of the poor? The official poverty rate stopped falling in the early Seventies and rose in the early Eighties. The rate has since declined to nearly its 1980 level. But income used to calculate the rate does not include government housing subsidies and food stamps. Count these as income and only one in ten Americans is poor today, vs. one in five in 1960. More important, the Michigan Panel data show that less than 2% of Americans are permanently poor.

The great cloud in this otherwise sunny picture: The improvement in living standards since the early Seventies has come less from working smarter and more from working harder. We're also postponing or doing without many things that used to be considered essential parts of the good life: We are marrying later, having children later, and having fewer of them. Whether we're happy with these choices or not—visions of the good life change over the years—they are undeniably trade-offs. Says Brandon Balthazar, a recruiter for the Prudential in Newark, New Jersey: "At my age my parents had a kid, a house, commitments. I never thought I'd be 31 and not have kids. It surprised me."

Everybody knows that ours is a fly-now, pay-later age, and many people—consumers as well as economists—worry about our reliance on debt. "The country today is run on a credit card," says Bobby Horvath, 43, a second-generation rubber worker in Akron. "When my dad was young, he saved for it, then he bought it." Less well known is that despite our heavy-duty borrowing, the net worth of American households—assets minus liabilities—has kept growing right in line with our incomes. The average net worth per American has swelled by three-fourths since 1960.

By standard measures, the distribution of wealth, like the distribution of income, has shifted slightly toward the top since the Fifties and Sixties. The difference is "marginally statistically significant," according to Robert Avery, an economist at the Federal Reserve. But, Avery adds, if you include employees' accumulated pension rights, which normally are not part of wealth calculations, that tilt toward the top turns into a slight decline. Ed Wolfe, an economist at New York University, argues further that people's claims to future Social Security income should be taken into account. When they are, the inequality of wealth has diminished steadily since World War II.

UNEQUAL WEALTH does not seem an issue worth stewing about in any case unless it is so severe that it provokes widespread envy and anger. The swift, the clever, the lucky—and yes, some of the larcenous too—will inevitably get richer. More important are the opportunities for earning money. The total number of jobs has barely kept pace with the number of Americans who want to work. But the proportion that are "good" jobs—high-skilled, high-paid—has increased, according to Neal Rosenthal, a Bureau of Labor Statistics economist. Again in today's dollars, jobs that pay more than $45,000 a year, mostly managerial and professional, account for about 8% of all full-time, year-round positions now, vs. 3% in 1960. And the fraction of menial, low-paying jobs is smaller: 16% now vs. 21% in 1963.

Is starting out harder? Starting out was *always* hard. George Winch Jr., 32, an obstetrics resident in San Francisco, compares his situation with his father's: "Getting into resi-

THE WEALTH OF NATIONS: THE WORLD IS GETTING RICHER

■ Though Americans are living better than ever, the rest of the world is doing pretty well, too. The myopic Thomas Malthus has been proved wrong one more time. Populations do not necessarily starve themselves down to size. The planet now supports close to five billion people more comfortably than it sustained three billion in 1960. Two countries—West Germany and Japan—have made such astounding progress that the U.S. no longer has indisputably the highest standard of living among major industrialized nations.

Country-by-country comparisons are difficult. The U.S. had per capita income of $16,494 in 1985 and West Germany $10,243. This reveals something about the relative ability of Americans and Germans to buy Rolex watches and Sony stereo systems and other internationally traded items but nothing about their ability to pay for houses and haircuts, whose prices differ vastly depending on the market. To account for variation in local costs, two University of Pennsylvania economists, Alan Heston and Robert Summers, use a complicated system to compare the wealth of nations in terms of the purchasing power parity (PPP) of their citizens.

They assign the U.S. an index score of 100. By comparison, West Germany gets an 84, which means that on average Germans have 84% of the goods, including capital goods, and services, including government services, that Americans do. That's up from 40% in 1950.

But experience suggests that even the PPP adjustment does not tell the whole story. FORTUNE associate editor Louis Richman, who recently returned from three years in Frankfurt, points out that although Germans have slightly fewer cars than Americans (42 for every 100 persons vs. 48 in the U.S.), they do not need as many. Americans are more likely to live in suburbs and Germans in cities.

Americans own more clothes and boats and vacation homes, but Germans travel outside their country more and have six weeks of vacation a year in which to do it (vs. the U.S. average of 2½ weeks). A German is only half as likely to be murdered as an American. One of the few respects in which American life is clearly more agreeable is the opportunity for a second chance. A German businessman who goes bust is marked a failure for life. An American can pick himself up and try again.

The French score a respectable 79 on the PPP scale, while the British manage only 66—four points below East Germany. The Italian number is 54, and the Soviet Union ranks last among major industrial powers with a mere 47.

Japan rates a 77, a remarkable jump from 17 in 1950. In the 1960s the acquisitive dream of a Japanese family was the three C's: car, color TV, and cooler (air conditioner). Today 57% of Japanese households have air conditioners, 71% have cars, and 99% have color television sets, compared with 60%, 87%, and 88% in the U.S. Although many Japanese are still satisfied with a package tour to Honolulu, younger travelers in particular want individual jaunts, such as a trip to Malibu for skin diving.

Males born in Japan in 1985 can expect to live to 75 on average, vs. 72 for Americans. And Japanese can walk the streets of Tokyo at night and ride the subways without fear.

The world's most spectacular advances have come in Asia. Hong Kong (PPP 58), Singapore (46), Taiwan (36), and South Korea (31) have spawned middle classes that live in homes with electricity, telephones, and indoor plumbing. They take family vacations and send their children to college, often to the U.S. FORTUNE Asian editor Louis Kraar recalls that when he first visited Hong Kong in the early 1960s the haggard Chinese residents rarely escaped the exhausting routine of daily labor. Today Hong Kong's harbor is crowded with robust young Chinese relaxing on their yachts.

Though the People's Republic of China gets a PPP of 19 and India a dismal 7, both have made modest progress in recent years. And because the two countries account for almost 40% of the world's population, even small gains have an enormous impact on the sum of global wealth. Ordinary Indians now have at least a few amenities. "Wristwatches were rare when I first went to India 20 years ago," says Jean Baneth, a senior economist at the World Bank. "Now they are common, and so are transistor radios."

Latin American nations boosted their living standards considerably through the Sixties and Seventies on money borrowed from the U.S., Western Europe, and Japan. Now the debt crunch is pushing them backward. A generation ago Argentina seemed close to a standard of living comparable to the best of the West. But Argentina's per capita GNP grew at a paltry 0.2% a year from 1965 to 1985, compared with 1.7% for the U.S. and 4.7% for Japan. Argentina's PPP: only 30.

Sadly, a few countries, especially in central Africa, seem worse off. Michael Schatzberg, an associate professor of African studies at Johns Hopkins, says that when Belgium granted independence to Zaire in 1960, the typical peasant farmer could feed his family and sell enough cassava to buy such rudimentary luxuries as a flashlight and batteries and some primary schooling for his children. Since then, Schatzberg says, repressive governments have driven down crop prices so far that many farmers have withdrawn from the cash economy and simply subsist. Zaire has a feeble PPP of 2.5. While the world may be a better place, it is not yet altogether good. — **Lee Smith**

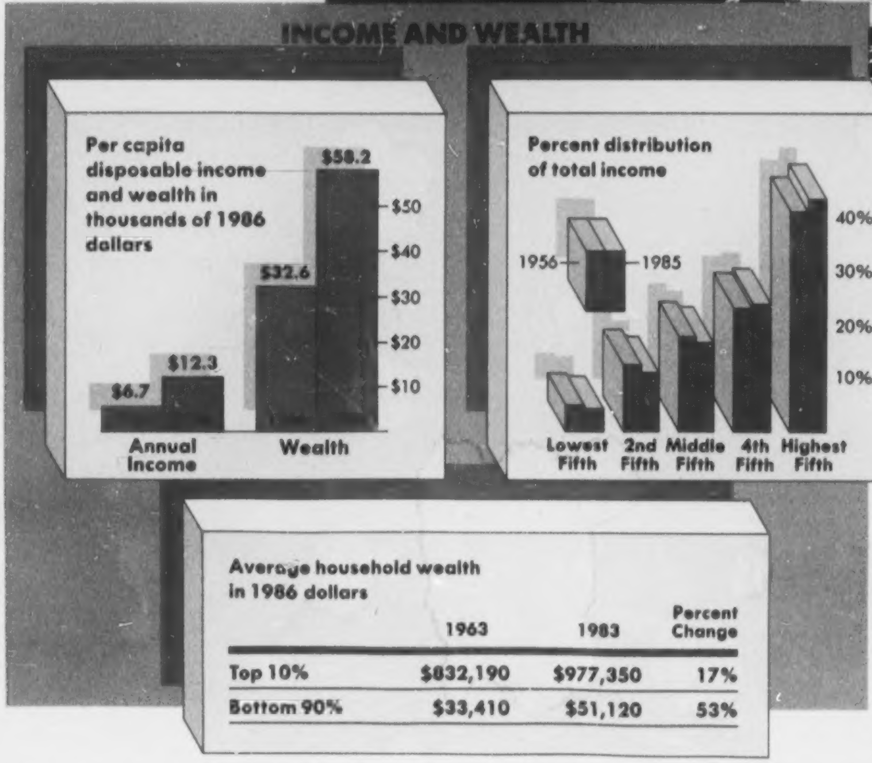
Japan's leap: *When Kuniko Kanemaki was 2 (inset, with parents in 1957), times were lean. Now she and her family live, if not like kings, much like Americans.*

BRUCE OSBORN

ANDY FREEBERG

The Elite Expands

The growing totals of income and wealth are being shared by a greater diversity of people. "There are many more doors open to me," says Brandon Balthazar, 31, of Montclair, New Jersey (far right). A campus recruiter for the Prudential, Balthazar has breakfast here with two recent recruits. The black elite, to which both he and his parents belong, has grown sixfold in the past decade and a half. And the black middle class is a solid majority.



Average household wealth in 1986 dollars

	1963	1983	Percent Change
Top 10%	$832,190	$977,350	17%
Bottom 90%	$33,410	$51,120	53%

dency programs is much, much tougher now. But just as I ~~spent a couple of~~ years working at the Indian Health Service to repay my medical school loans before I could get on with my residency, dad spent a couple of years out in World War II and Korea. So he was about 34 when he went into private practice. Residents got practically no pay then. After my older sister, Jennifer, was born, Grandma came to babysit, and Mom had to go out and get a job. I'd say that's pretty comparable."

In some ways American well-being has increased much faster than plain buying power. The first wealth, wrote Ralph Waldo Emerson, is health. We can expect to live five years longer than we could in 1960. Infant mortality, which plateaued during the Sixties, fell by one-half during the Seventies and Eighties. Fewer adults die of heart disease or in accidents on the road or on the job. Whites live longer than blacks on average, but the gap in life expectancy, six years, is two years smaller than it was in 1960.

Some Americans who are living longer are merely vegetating in nursing homes—more is not always better. There are new diseases, of which AIDS is the most devastating. The U.S. has long trailed the Scandinavian countries and Switzerland in infant mortality rates and longevity; recently it has been surpassed by several others, including West Germany, Japan, and Spain. But blame the Statue of Liberty in part. Those countries don't admit waves of immigrants, many of whom arrive impoverished, malnourished, and with short life expectancies. On the whole, by Emerson's yardstick, Americans are richer now than ever before.

MEDICAL CARE COSTS have soared, but many more Americans can get care when they need it. That's mostly because of the advent of Medicare and Medicaid in the mid-Sixties, as well as a widening umbrella of private insurance plans. Fully 85% of Americans now have some form of coverage, vs. 70% in 1962. Poor Americans have made the biggest gains, according to Christopher Jencks, a sociologist at Northwestern University. More than two-thirds had some kind of health care coverage last year, vs. a third in 1960. Geography is also less of a barrier to good care. Because the medical schools turned out bumper crops of graduates in the late Seventies, says Steven Rosenberg, a professor of public health at Columbia University, young M.D.s have started to fan out to small towns that have been short of practitioners for decades.

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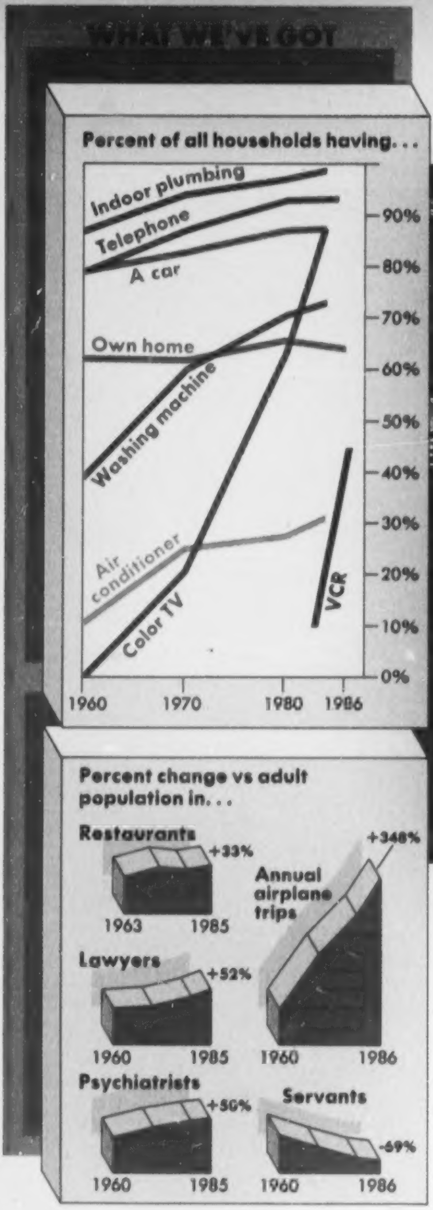


KEN PROBST

When Enough Is Enough

The grass is plenty green for trucker Kevin Stephens, 39, and his family in Del Rio, Texas, here amid a few of their belongings. Not in the picture: his other two houses. Says he, "Ten or 15 years ago, getting material things posed such a large mountain for me to overcome. They blocked out everything else. After I got them, it was time to move on to something else. Like Rodney Dangerfield says, you want respect."

Americans eat more, even though they spend less of their budgets on food than ever before. The 10% rise in the calories we consume isn't necessarily a sign that we are living better, since more of us die from overeating than from its reverse. But we have also been upgrading our diets since at least 1970. We eat more fish, chicken, and fresh vegetables, more fruit, less cholesterol-filled red meat, and fewer fat-laden dairy products. Though some of the poor still go hungry, the patterns of food consumption by the poor and the affluent had converged by the late Seventies, mostly because of the food stamp program.

Nothing contributes more to middle-class malaise than signs that the staples of the good life—a new car, a house, a college education—are being priced out of reach. "You have to work harder and longer to get the same stuff," says Janet Kramer, 34, an executive secretary in New York City. "My mother-in-law was always telling me about the $1 deposit they put down for their first house." Indeed, when you look at prices *without* adjusting for inflation, the comparisons are stunning. The average set of wheels last year came with a sticker price close to $13,000—five times higher than in 1960. A 1986 Honda Accord costs as much as a suburban ranch house did in those days. (So, for that matter, does a year at Notre Dame.)

But it takes the average family 23 weeks of income to buy that median car now, vs. 26 weeks in 1960, and it's hardly the same car. The average 1960 Ford, Plymouth, or Chevy, though alluringly mauve or even cerise, had no power steering, no power windows, no stereo tape deck, and no air conditioning. It burned more gas. Handling and braking were atrocious by today's standards. Other safety features and pollution controls weren't part of the package, as witnessed by the scarifying death rate and sooty air of 30 years ago. And choices were among species of Detroit iron distinguished mainly by chrome, tonnage, and finnage—not exactly the vehicles for self-expression encompassed by the present variety of minivans, jeeps, and imports of all types. Even today's $6,000 entry-level car—say an Omni America or Hyundai—is better in most functional ways than the 1956 Cadillac, and it costs just 11 weeks of the average family's income.

AS A RESULT, Americans own more cars. The two- and three-car family—a relative rarity in what was supposedly the great age of the automobile—has squeaked over the 50% line in the post-OPEC Eighties. Fewer than one in ten households has no car today, vs. one in five in 1960. And we acquire them when we are younger. George Golomb, 40, a Baltimore lawyer who got his first car—a red MG—at age 22, remembers when his parents got theirs: "They were 36 and 37. It was a Chevy. I don't remember the model—just that it was very exciting."

Houses, on the other hand, *are* less affordable. The typical used house—the kind first-time buyers buy—cost $83,000 last year. The median family had to fork over an

$18,000 down payment, $1,725 in closing costs, and 24% of its income every month to call a median-priced home its own. Not surprisingly, the ownership rate for boomers in their early 30s has dropped five percentage points, to 55%, in the Eighties.

But the recent decline isn't as scary as it seems. Housing is no longer as appealing an investment as it was in the Seventies, when it was "a super Christmas club," as George Sternlieb, a housing expert at Rutgers University, puts it. A longer-term perspective helps too. More Americans own their own homes than they did in the Sixties, when ownership barely increased. Prices still bear about the same relation to family income, 3 to 1, that they did in the late Fifties. Monthly carrying costs are higher, but not that much higher than in the mid-Seventies when almost everyone who could buy did. Experts agree that home ownership rates are bottoming out now and should resume their gradual rise.

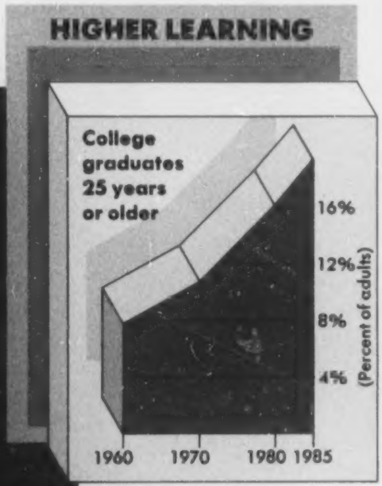
Most young buyers have forgotten how long it took their parents to land their first house. "We lived with my parents first, then her parents; then we rented Grandmother's house," recalls Burdette Jenks, the retired troubleshooter. Says Nancy Rodgers, 40, who runs a dairy farm in Vermont with her husband, Jim: "When we started out, most people in this area didn't buy a home right away. They rented a furnished apartment. They built up their savings. Now they start out with everything, and it's rough to keep up. I know there was financial pressure before, but people weren't thinking as big."

INDEED they weren't. Most boomers wouldn't be caught dead in their parents' first nest. Those Levittown dream houses were exactly half the size of today's new homes, and young families were a lot bigger. Building codes weren't what they are. The nearest equivalent today, quite literally, is a mobile home—the typical price of which is about half that of a Levittown econobox, not including its tiny plot of land. Says Bobby Horvath, the Akron rubber worker: "My parents' first house didn't even have a septic tank. We put the septic in ourselves. The basement wasn't cement—it was dirt." Bobby's first house was a 1½-story Cape with, he says, "all the modern conveniences."

Many young Americans, unwilling to settle for a tract house, much less a mobile home, would rather rent. The average apartment today is newer, more spacious, and more stuffed with amenities than in 1960. Even people who have little choice about where they live and no chance of home ownership are better off. Many ghettos have become conspicuously more wretched places, but most poor people's housing conditions have improved markedly. Mainly because of federal rent subsidies and a construction boom in the Seventies, the fraction of Americans who live in old and dilapidated buildings has dropped since 1960.

Remark at a party that the middle class is being priced out of a college education, and you can expect a chorus of assent. College bills have outpaced inflation since the Fifties, but never by a wider margin than during the past few years. Sending a freshman off to a four-year private college last fall took a cool ten grand. The 1960 father laid out only $1,600 (unadjusted for inflation).

So how is it that college enrollment is at an all-time high? One-half of young adults spend at least some time within the ivy walls, compared with one in four during the Fifties. Answer: Private colleges turn out only about


HIGHER LEARNING

ANDY FREEBERG

Father Knows the Best Is Yet to Come

Bobby Horvath, 43, of Akron is a second-generation rubber worker with a high school degree. His daughter Kelly is off to college this fall. Says Horvath: "When you got four kids, you're trying to give them something that maybe you didn't have when you were growing up. Education is everything now."

20% of the country's graduates. The families of the remaining 80% send their kids off to heavily subsidized public colleges. Their bills are only half those of the private-school crowd—and have actually declined slightly as a share of the income of families with college-age children.

The explosion in financial aid for college students also lets many attend who could not in the past. Says Christopher Jencks: "If you couldn't afford college in the Fifties, nobody would lend you money except Uncle Harry, if you had one." Now about half of all freshmen get loans, grants, or work-study jobs on campus, vs. 4% in 1960.

Some of the biggest gains in living standards have come for those who started out the furthest behind. Back in those golden Fifties, most Americans did not notice or care that one-third of the elderly and one-half of black people were destitute. Economic independence for women was not an idea to be taken seriously.

THE OLD in America today work less and live longer, and at the same time they are wealthier and more independent than ever before. Their median per capita income, now higher than that of the average American, has doubled since 1960. Social Security benefits and private pensions have soared. Today's elderly have piled up assets like no generation of oldsters in history: Though they account for just one-sixth of the population, they hold title to one-third of all household net worth and 40% of all financial assets. Fewer than one in ten people over 65 are poor.

As a result the elderly are less likely to be burdens for their offspring—whose living standards are thus improved in ways the statistics fail to capture. Fewer than 10% live with their children, vs. more than 30% in 1950. "I was the Social Security of my parents," says Buddy Mintz, a 76-year-old retired piano salesman in North Miami Beach, Florida. "God forbid my children should have to take care of us. The big difference is that my parents had nothing after the Crash. I maintained the family. When my brother and sister got through school, they got jobs and took over."

Today it's more likely that parents and grandparents are helping the kids. In the early Eighties about one-third of first-time home buyers got part of their down payments from relatives, up from about one-tenth in the late Seventies and who knows what tiny fraction in earlier decades. Jon and Ginny Goldsmith, a Chicago couple in their early 30s, got help from Ginny's parents to buy and renovate the three-story apartment building they live in. The couple earns about $30,000 a year, or more than half their income, from their rental property, which includes two other buildings they recently bought with their own cash. Says Ginny: "We took the money my parents gave us and made it worth more."

Barely 20 years ago, after riots swept Detroit, Watts, and ghettos in a dozen other cities, the Kerner Commission report opened with portentous words: "Our nation is moving toward two societies, one black, one white—separate and unequal." It didn't happen that way. Instead most blacks have joined the middle class. More than three-fourths of black men now earn middle-class incomes or better, according to James Smith, senior economist at the Rand Corp. In 1960, 40% of black women were still working as domestics or agricultural laborers, vs. 5% today. And the gap between the earnings of black and white women has nearly disappeared.

Back in those golden Fifties, most Americans did not notice or care that one-third of the elderly and one-half of black people were destitute.

"I'm optimistic. Very optimistic," says Easter Green Stewart, 37, a data-processing clerk in Harlem. Her grandmother was a domestic, her mother has been working in a leather-goods factory for the past 30 years. Says Stewart: "She stands up all day, and she hasn't taken more than a day or two off in the last two years. Mother works so hard . . . and she has nothing." Stewart and her husband, who works in a program that shelters homeless men, have recently bought a piece of land outside Atlanta. They hope to move there and build a house in three or four years.

The black elite has grown even faster than the black middle class. About 15% of black men make more than the average middle-class white, and the proportion is rising. Until fairly recently, most black college graduates went into government. Now they are heading for private industry, where the big money is. The most dramatic exemplar of this new generation is Reginald Lewis, who recently bought a huge hunk of Beatrice Cos. and became the country's top black businessman (see Fortune People).

A growing proportion were raised by parents who themselves were of the elite. Brandon Balthazar is the son of two professionals who collected art and vacationed in Europe. A Harvard graduate, Balthazar earns well over $50,000 a year. His top-notch education—and the excellent contacts he made at prep school and college—has given him better opportunities than his parents had. Says he: "There will be even fewer obstacles for my kids. We'll be talking about three generations of college-educated blacks."

The lot of women has changed as much as that of blacks in many ways. The proportion who work is only part of the story—66% hold jobs today, but few remember that a surprising 40% did in 1960. More important is the change in expectations women have of themselves. Some of the newcomers to the labor force are doubtless working because their husbands cannot earn enough. At least as many, and probably more, look at work or a career as imperative in its own right. For many it is a source of power and self-esteem, a worthwhile trade-off for delaying childbearing, and a welcome complement to motherhood afterward.

SINCE 1960 work has become more rewarding. Significant numbers of women have broken into high-paying, formerly male preserves. About 14% of police officers (vs. 6% in 1960) and 18% of lawyers (vs. 2% in 1960) are women—to cite just two examples. More than a third of all MBAs last year were granted to women. As younger women arrive at the workplace with more credentials—and older ones acquire seniority and experience—women are getting more of the pay. Younger women now earn 75% as much as their male counterparts, vs. 67% in 1960.

Yet there remains disappointment amid plenty. Ask a typical boomer whether he is living better than his parents, and the answer is likely to be, "My head says yes, but my heart says no."

The head and heart are both right. At each rung of the ladder, the boomers can buy more and have a greater variety of choices than their elders. But their parents did move up the ladder faster than these kids, whose sheer numbers have depressed pay levels since they entered the work force. And freedom of choice can impose its own burdens. In the dual-career couple, who will care for the children? Whose aspirations will take the beating when the upward path calls one person to another city?

continued

The quality of life seems often not to be what it was in those simpler and less crowded times. The electronic media that expand our knowledge also immerse us in the world's woes. Our many cars pollute less, but they lodge us in monster traffic jams. We fly more, but in mounting discomfort. We dwell on crime, drug use, and other social ills that seem more menacing than ever.

Mostly, though, we suffer from an acute variant on the timeless theme of high expectations. The reach that exceeds the grasp has always earmarked the American middle class. Sinclair Lewis's Babbitt "feels at once triumphantly wealthy and perilously poor." Wealthy when he eyes his income ("eight thousand good hard iron dollars. Gee that's not so bad"), poor when he contemplates the rising claims on it ("But—Way expenses are—Family wasting gasoline and always dressed like millionaires").

That we are living better, says Amitai Etzioni, a sociologist at George Washington University, is "both true and immaterial if we don't have a criterion by which the cup is full." Boomers are less likely than their parents to feel that enough is enough. Adults in the Fifties did much better than they had been led to expect while growing up during the Depression. Result: A little more felt like a lot. Says Nancy Cranston, 60, who runs a hardware store in Woodland, California, with her husband, Eldon, 62: "When I had my two kids, I didn't buy underwear. Birthdays and Christmas, my parents would give us money, and I'd spend it at the grocery store. Maybe we were just too dumb to know better, but we enjoyed every minute of our life." The boomers, on the other hand, grew up during the Fifties and Sixties with great expectations. When they flooded into the labor market during the Seventies, reality proved harsher than anticipated. Much more feels like a lot less.

A Wealth of Opportunity

Ron Gazija, 29, of Chicago is a self-employed electrician who has been his own boss for six years. He says, "At 29 my dad was just here from Yugoslavia. He was looking for a job, didn't have a dime, didn't have a house. He worked in a factory all his life. I struggled a couple of years with my business, but I'm way, way ahead of him now."

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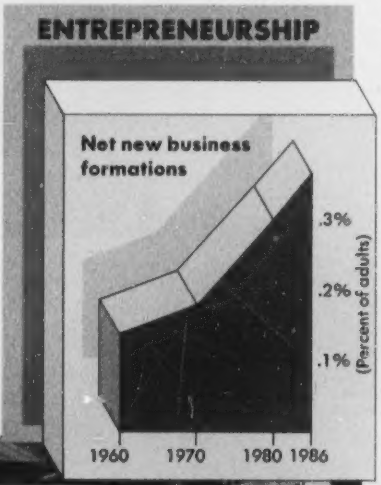

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Also not to be ignored are the larger uncertainties that nibble at the periphery of our consciousness. Even during the Cold War the world seemed a less threatening place: We knew we were the earth's greatest industrial power, and we knew who our enemies were—and why. We thought we could do it all. Now we sometimes wonder if we can do it at all.

So it's not the best of all possible worlds. Yet optimism—like high expectations—remains one of our durable characteristics. More than three-fourths of young Americans believe opportunity is greater now than a generation ago, according to a 1986 Conference Board poll. A recent Roper poll reports that a similar proportion rate their chances of achieving the American Dream as excellent.

Ron Gazija, 29, of Chicago is among them. His father, who emigrated from Yugoslavia, improved his life dramatically, and the son expects to do better yet. "When dad was my age, he worked 40 hours a week in a hot place," says Ron. "I work, and sometimes more than 40 hours, but my work is different. I have freedom. I do this for myself." Ron's father was a machinist. With dad's help, Ron is a self-employed electrician. "He hustled," Ron recalls of his father. "He helped me get jobs so I'd learn the trade. He wanted to make sure I didn't sit in that factory."

OPTIMISM and determination alone will not guarantee a continuing rise in living standards for Gazija and the other young Americans who have 30 to 50 years of work ahead of them. We have largely managed to escape the consequences of slower productivity growth by working more, having smaller families, and, in the Eighties, borrowing from abroad to boost consumption at home. We cannot live beyond our means forever. We may like smaller families, but we won't be happy if our prospects for a better life depend exclusively on greater and greater toil.

That leaves us with a tall order: Raise the growth rate of productivity. That goal has eluded us for 15 years, but the prospects have lately improved. Boomers have gotten older and more experienced. And the corporate drive for greater efficiency is well under way. Two percent a year, twice the trend of the recent past, is the magic number; it's the average for the last 100 years. It sounds less than speedy, but if we reach it our living standards would double yet again by the year 2025, give or take a year or two.

Not bad. ■

UPHEAVAL AHEAD ON WALL STREET

After five sunny years, the investment banks are headed for gloomy times. Profitability has been zapped and the firms are taking big risks to keep earnings up.

■ *by Robert E. Norton*

AS THE DOW JONES industrial average spiraled to record highs in July and August, its ascent was eerily mirrored by that of a book called *The Great Depression of 1990*, which shot to No. 3 on the *New York Times* best-seller list—the nonfiction one. Written by a hitherto obscure economist at Southern Methodist University, Ravi Batra, the book warns of an inevitable social and economic cycle that is about to destroy the world, financially speaking, as we know it. It is prominently displayed in the bookshops of New York's financial district, and aptly so: While most readers will reject Batra's conclusions, the parallels he draws between the excesses of the Twenties and the Eighties are haunting, and no set of institutions has been gorging more greedily than Wall Street's big investment banks.

Wall Street has been an investment banker's paradise for five years. A bull market in stocks, a bull market in bonds, low inflation, easy money, and a superheated market for mergers and acquisitions—all blossomed simultaneously. But while revenues boomed at the big investment banks, expenses grew even faster, with the startling effect, shown in the chart on the opposite page, that profitability has steadily declined. The stocks of virtually all big securities firms are trading, relative to the market, at their lowest levels since 1982.

As profit margins have narrowed, Wall Street firms have been moving into riskier and more lucrative businesses, such as lending their own funds to finance takeovers. At the same time, managers are admitting that the industry's growth has outstripped their ability to manage it. The implication is clear. Even if the markets and the economy continue to bustle, the securities industry is headed for a shakeout.

In the gold rush atmosphere of recent years, big old investment banks like Salomon, Morgan Stanley, First Boston, and Goldman Sachs have grown as fast as startup companies in a hot new industry. The number of employees at Salomon, for instance, jumped 40% last year. Compensation costs for the 11 largest investment banks went up 40% in 1986, while revenues increased 26%.

REPORTER ASSOCIATE *Lori Lesser*

Full-line brokerage houses such as Merrill Lynch, Shearson Lehman Bros., and Prudential-Bache have many more employees, most of them engaged in retail stockbrokerage operations. But since 1984, when retail business slowed and its profitability skidded, those firms have been pushing aggressively into the domain of the investment banks, launching a ferocious bidding war for new recruits and experienced specialists. The brightest MBA graduates now command base salaries of $75,000 a year and can double that with bonuses. For investment bankers or traders with a few years' experience, compensation packages in the mid six figures are commonplace and $1 million a year is possible.

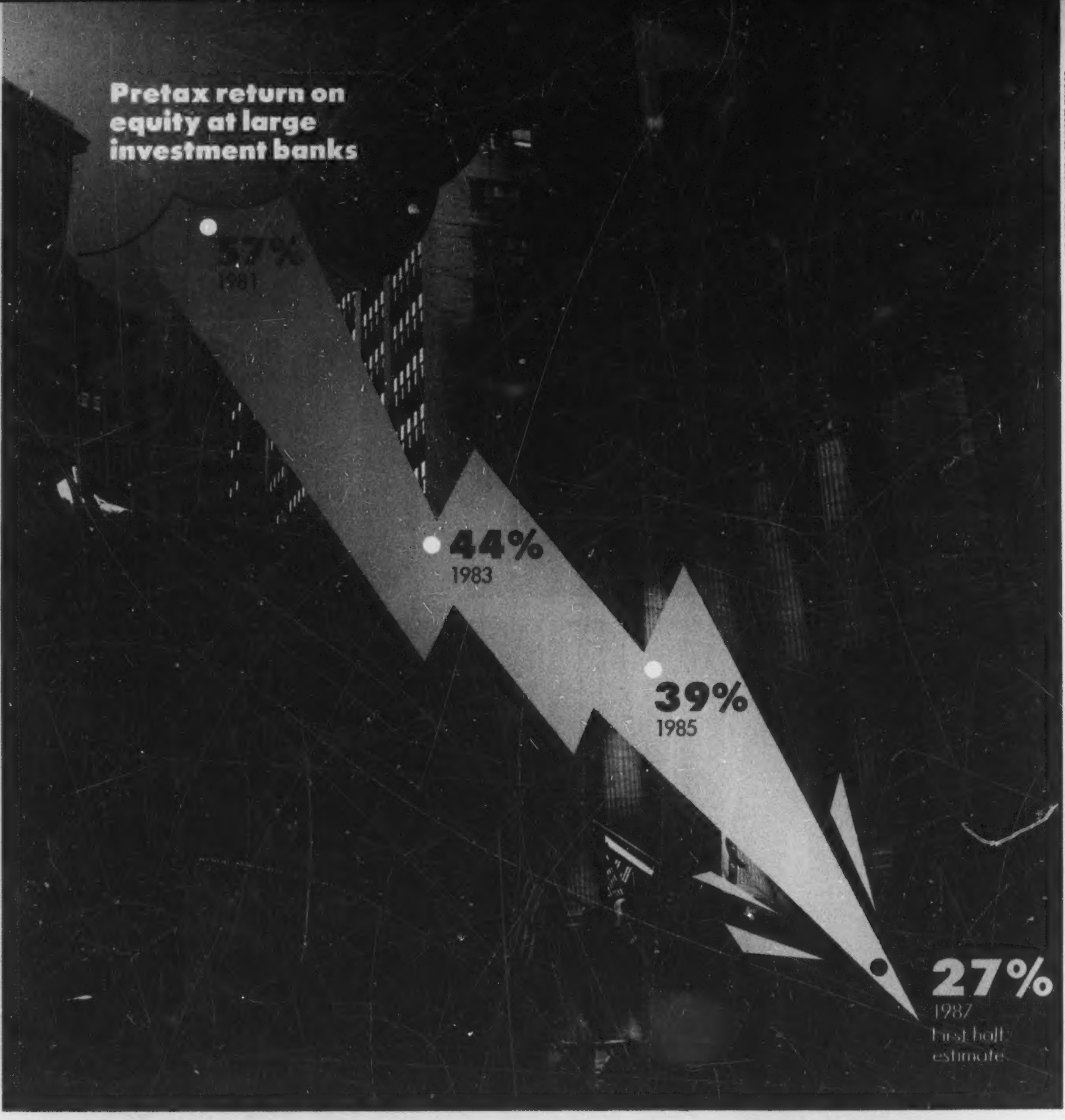
Senior Wall Street managers know this growth is unsustainable but can't seem to do much about it. Industry graybeards privately cheered when John H. Gutfreund (pronounced Goodfriend), Salomon's chief executive, began publicly questioning the expense trends in the securities business last fall. But the big players are still dangling $300,000 pay *hikes* to lure 28-year-olds from one another. An executive at a big firm speaks for them all: "Pay scales in the business are absurd. But you can't cut them in an environment where the competition is prepared to maintain them."

Hiring has slowed this year, but only to an average increase of 20% or so. And those percentage gains, it should be noted, are on top of the swollen staffs that built up over the last few years. At First Boston, limiting growth to 20% this year means 900 new employees—a number equal to half the firm's personnel in 1982.

Wall Street's expansion also has been fueled by the increasing "globalization" of financial markets. The growth of the Euromarkets had drawn investment bankers to London years ago, but the deregulation of Britain's capital markets last fall and the beginnings of deregulation in Tokyo have sent them scrambling, checkbooks ready, to stake out new turf. First Boston's Euromarket affiliate and Morgan Stanley, for instance, have signed up for half a million square feet of office space in London—roughly a quarter of the space in the Empire State Building. Salomon last year earmarked $300 million in capital for its Tokyo subsidiary, making it the city's fifth-highest-capitalized securities dealer, right behind Japan's big four. These operations are expensive. Keeping a security analyst in Tokyo costs at least twice the inflated salary he or she earns in New York, and investment bankers admit that profits in these new markets are years away.

ONE OF THE boomingest businesses is Wall Street's latest fad: what has come to be called merchant banking. The term is borrowed from Europe, where it describes investment banks, unfettered by regulation, that do everything from accepting deposits to buying and selling companies. On Wall Street, merchant banking most often means using the firm's own capital to finance takeovers and leveraged buyouts. Several Wall Street firms began doing this in a small way in the early Eighties, but the business went supersonic only last year.

This was partly a reaction to competitive pressure. As the pace of leveraged buyouts and hostile takeovers quickened, the speed with which deals could be financed became more important. That gave Drexel Burnham



SOURCE: SECURITIES INDUSTRY ASSOCIATION

ERIC SANDER—GAMMA/LIAISON

Storm Signals for Investment Bankers

Riskier than most businesses, investment banking also used to be much more profitable. But as expenses have grown unchecked during the bull market, profitability has plunged.

Lambert a mighty edge. With its unmatched network of junk bond investors, Drexel could assure virtually any client that it could raise the money to finance a deal, and that assurance alone often was enough to allow deals to proceed. Other investment banks responded by simply lending their own capital directly to raiders or investor groups in what is called a bridge loan. The raider repays the loan by issuing junk bonds or other securities after the acquisition is complete. Within the past year, bridge loans became a very big business (see table).

The investment bankers earn enormous fees for putting their capital at risk. In one stillborn deal last year, Merrill Lynch stood to make as much as $200 million by agreeing to provide $1.9 billion to Sir James Goldsmith for his aborted run at Goodyear Tire & Rubber. Fees approaching $100 million are becoming commonplace. These include charges for investment advice, an interest rate on the bridge loan of about five percentage points over the prime rate, and commissions for underwriting the securities that pay off the loan. But the big fees reflect equally big risks, the most obvious being that the investment bank making a bridge loan will be unable to arrange permanent financing for the borrower.

By getting directly involved in deals and no longer acting solely as middlemen, investment bankers also have been playing a role that has been perceived as improper for more than 50 years, ever since Congress

SIZE OF BRIDGE LOAN in millions	INVESTMENT BANK	BORROWER AND DEAL	DATE OF LOAN	STATUS OF REFINANCING
$985	First Boston	Harcourt Brace Jovanovich Inc. recapitalization	7/23/87	Pending
$976	First Boston	Union Carbide Corp. restructuring	12/08/86	Completed in March with common stock and debt offering
$917	Morgan Stanley	Management and Morgan Stanley LBO of Burlington Industries	5/24/87	Pending
$865	First Boston	Campeau Corp. hostile takeover of Allied Stores	10/31/86	Completed in March with debt offering
$800	Drexel Burnham	Carl Icahn acquisition of TWA	7/22/87	Pending
$796	Drexel Burnham	Management LBO of Hospital Corp. of America	5/31/87	Pending
$705	Merrill Lynch	Management and Merrill Lynch LBO of Borg-Warner	5/18/87	Completed in July with debt offering

The Biggest Bridges on Wall Street

Bridge loans to finance takeovers and LBOs put an investment bank's own capital at risk. They are Wall Street's latest fad and, so far, its most remunerative. But like all bridges, they could collapse.

passed the Glass-Steagall Act separating investment banking and commercial banking. As one takeover expert says of the bridge-loan craze: "Just as commercial bankers are fighting to get Glass-Steagall repealed, investment bankers are doing the kinds of things that got it enacted in the first place."

The outlook for conventional investment banking activities has already turned cloudy, even as the sun shines so brightly on the stock market. The restructuring of corporate America has transformed mergers and acquisitions, once an investment banking backwater, into Wall Street's biggest business. M&A fees account for one-quarter to one-half the revenues at most big firms and provide the cash that allows them to spend so freely in virtually all areas. The total dollar value of M&A deals announced last year was $173 billion, the third straight $100-billion-plus year. The dollar value of deals rose another 18% in the first half of 1987, according to W.T. Grimm & Co., a Chicago firm that tracks them. But the number of deals announced in the first half was down 39% from a year before, and many experts are predicting that the new tax law, the insider trading scandals, and lofty stock prices will combine to choke off the takeover boom. Any significant decline in M&A fees would clobber the investment banks' income statements.

Nearly a third of investment banking revenues, on average, come from securities trading, and profits in this business are looking even more uncertain. Profit margins on securities trades have steadily declined. An order for $10 million of U.S. Treasury bonds or notes that might have yielded revenues of $12,500 in 1982 now yields about $3,125. The dealers have been making up the difference on volume. Annual trading volume at both Salomon and First Boston, for example, exceeded $4 trillion last year, twice as much as three years ago.

THE WILD BOND MARKET swing in April revealed just how dicey this business can be. Worries about a falling dollar and higher inflation caused foreign investors (mostly Japanese) to pull back from the bond market, and prices dropped 10% in just a few weeks. Result: Investment banks swallowed ulcer-inducing losses on their trading inventories. The biggest loss—$377 million—hit Merrill Lynch when it couldn't unload a hoard of a volatile new variety of mortgage-backed securities. To put that number in perspective, Merrill Lynch's annual pretax earnings have exceeded $377 million in only one of the past three years. A $100-million mistake in Treasury bill options wiped out second-quarter profits at First Boston. At Salomon, the traders' trader, profits plunged by two-thirds, due mostly to trading losses and to revenue lost as volume shrank following the price collapse.

Profitability has also dwindled in securities underwriting, the traditional bedrock of investment banking. The fee charged for underwriting a straightforward offering of corporate bonds, for instance, had been about $8.75 per $1,000 up until the early Eighties. It has since dropped by about a third. Here the event that brought the change was deregulatory: the advent of so-called shelf registration in 1982, which streamlined the procedures for registering and offering new issues of stocks and bonds. Before the change, investment bankers negotiated a fee with an issuing company, lined up a syndicate of other investment banks to place the securities with investors, and sold the offering when the issuer was happy with the market price. Now, a company merely announces that it wants to sell a given amount of securities and puts them "on the shelf." Then individual investment banks bid for the entire issue, without spreading the risk among a syndicate, and gamble that they can resell the securities at a higher price.

With expenses soaring, risks increasing, and revenues uncertain, the stock market's bearish assessment of the investment banks seems well founded. "There's no reason to think things won't continue to deteriorate for the investment banks in the long term," says Brenda McCoy, a security analyst at Paine Webber. Flat markets and a decline in merger and acquisition activity, she estimates, could cut profits at the big investment firms by 30% to 40%.

Bridge loans could turn into a mine field. Some investment banks have lent nearly as much as their entire stockholders' equity to a single borrower. Says a commercial banker: "They're breaking a cardinal rule of commercial lending, concentration of risk. No one breaks that rule for long with impunity." Says Felix Rohatyn of Lazard Frères: "The deals done so far have been conceptually brilliant, and have worked out. But what inevitably happens is that the capital commitments will get larger, the risks will get larger, and the margins smaller. Someone will get hung up somewhere along the line."

And there is reason to believe that the kind of volatility that rocked the bond market in April could continue or even worsen. Imagine the effect on today's jittery markets of, say, the crash of Tokyo's highflying stock market or the failure of a major financial institution. Henry Kaufman, Salomon's director of research, notes that nothing dramatic caused April's volatility, merely a heightening of inflation expectations, weakness of the dollar, and a modest firming in U.S. monetary policy. "These were not extraordinary events," he says. "I strongly believe that there are going to be far greater swings in the future, and these swings pose unquantifiable risks to participants in the market."

Kaufman is skeptical about junk bonds and bridge loans as well, and although Salomon has gotten into merchant banking much more cautiously than some of its rivals, his bearish views are unwelcome inside the firm. Kaufman resigned from Salomon's board last fall, feeling he no longer had enough influence on the firm's policies. Says Kaufman on the future of the industry: "There will always be an effort made to go to the next frontier of finance, where the returns tend to be higher. That can be successful, but there's a no man's land out there in that new frontier, where there are risks that may be greater than an investment banker or any banker should undertake."

Though few forecasters predict sharply higher inflation soon, if it were to come it could flatten the investment banks. "The people and systems that have built up so fast are very sensitive to inflation, so those costs would accelerate," says Samuel L. Hayes III, a finance professor at the Harvard Business School. At the same time these costs were increasing, Hayes says, rising interest rates would shrink the value of the investment banks' bond portfolios. Peter Cohen, chief executive of Shearson Lehman Bros., counts inflation as a major concern, and in the best Wall Street tradition of putting his money where his mouth is, Cohen may buy a sizable equity position in the oil business to hedge the risk.

OTHER WALL STREET executives are just as worried. The effort to rein in the growth in head count is one proof; another is a new hesitancy on the part of the investment banks to sign up for additional office space. There has been much managerial soul-searching. After Salomon's profits slumped last fall, Gutfreund put through a radical reorganization, naming the company's first chief financial officer ever. Merrill Lynch has hired professional managers from outside the brokerage industry, most notably Courtney F. Jones, former treasurer of General Motors.

The shakeout is already under way in London. The Euromarkets last year were hit by the same kind of trading turmoil that struck New York in April. The market for one of the more popular securities, floating rate notes, dried up last winter because of excess supply, and prices plunged. Dealers suspect that many investment bankers absorbed sizable losses. What's more, deregulation has made the competition in underwriting and trading downright frantic. In London's government bond market, the number of dealers went from seven to 27 last fall. Two big British commercial banks have already quit trading, and market participants say no one is making money. In July, Shearson Lehman announced it was rethinking its London strategy, amid rumors that the company would lay off up to a third of its 1,400 London employ-

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ees. A year ago the number was 900. The compensation packages demanded by bond traders, reports an American bank, have dropped by about 25% in the past month.

Unsurprisingly, just about all the investment banks are rethinking their strategies. Yet most managers doubt much will be done to cut costs as long as revenues continue to grow. Says Michael Aronstein, formerly a senior investment strategist at Merrill Lynch and now president of Comstock Partners, a money management firm: "It's like those experiments you read about where rats are fed cocaine. They just keep coming back until they're dead."

But if the financial markets turn south, the cost cutting will come with a vengeance. Wall Street's senior managers advanced the hard way, toiling for years before they reached millionaire status, and many of them resent the high-paid youngsters in their firms. Salomon's Gutfreund, for instance, complains that the newest recruits are interested only in money: "When people say that, and view this as a money machine rather than a career that has values and excellence in and of itself, it makes it very hard to run a coherent business." Asked what motivates the Young Turks, he answers: "I can't identify with these folks very well, so I couldn't give you an answer as to what's in those little pointed heads. I don't have a clue."

WINDLE PRIEM, who runs the financial services division at the headhunting firm of Korn/Ferry International, thinks compensation at the investment banks could drop by half in the not-too-distant future, even if there is only a modest slowdown in the business. "It could be a much bigger fall if we have the kind of cycles we had in the bond market in April," he says. A downturn also would likely bring a reordering among the investment banks. Those best positioned to prosper will be the ones with the strongest capital positions, especially those with deep-pocketed parents—Prudential-Bache (Prudential Insurance) and Shearson Lehman (American Express), to name two.

The coming upheaval will not have much impact on Wall Street's customers. Samuel Hayes of Harvard says that corporate borrowers might face higher financing costs if the investment banks became less aggressive. But foreign securities firms, if they escaped the same problems or simply were able to take a longer view, might use the opportunity to buy U.S. market share. Commercial banks, eager to make inroads into the securities business, could follow suit. Individual investors would be little affected—provided, of course, that the securities industry's troubles did not coincide with a market crash. The days when the big firms could cut losses by raising commissions on retail trades, as happened in the late 1970s, are over. Discount brokers would see to that.

How bad could it get? Barring a truly disastrous market like 1973 and 1974, the most likely scenario is the close of an unusually and unhealthily opulent era on Wall Street: fewer stretch limos, a new respect for leanness instead of size, and maybe a little less of the arrogance and condescension that all but the most sensitive investment bankers seem unable to conceal when they meet less highly paid mortals. ■

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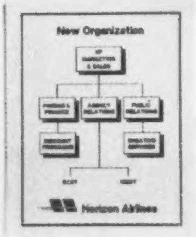

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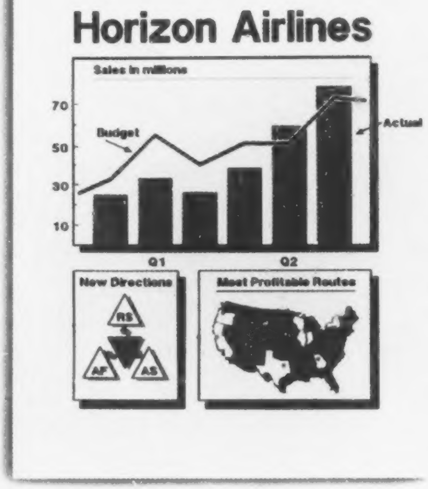

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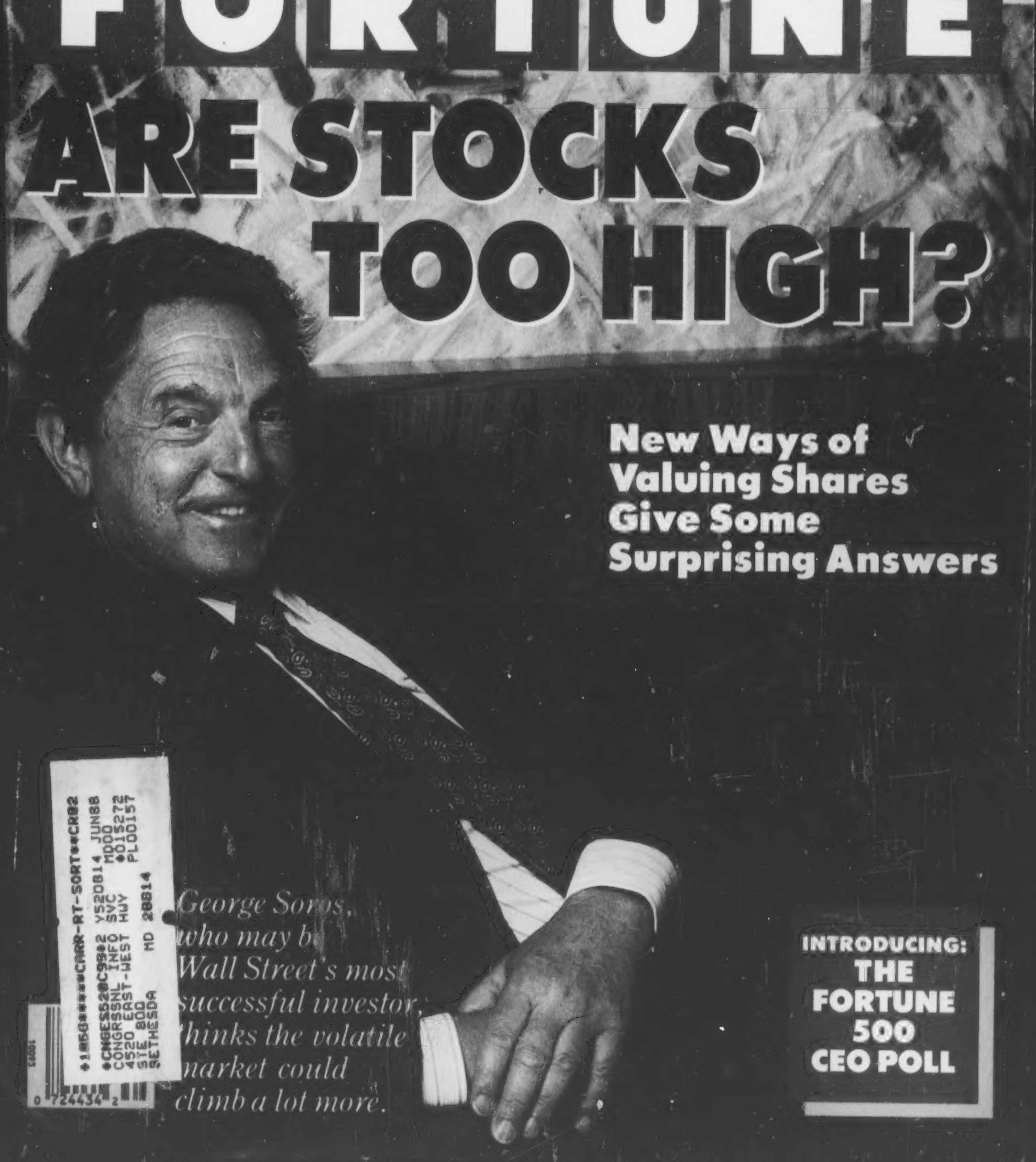

ARE STOCKS TOO HIGH?

New Ways of Valuing Shares Give Some Surprising Answers

George Soros, who may b Wall Street's most successful investor, thinks the volatile market could climb a lot more.

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FORTUNE

"Just because the market is overvalued does not mean it is not sustainable."

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"It was just too easy. I buy stock—and boom."

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"What we're not going to do is jeopardize the future of the company to pay off short-term investors."

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"You have to burn your totems. It's not disrespectful."

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"We see the industry downturn as a golden opportunity to start our own company."

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"Allowing all aircraft to fly whenever and wherever they like is like trying to cram a size seven foot into a size five shoe."

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Solving the crisis in the skies won't be easy or cheap. *by Robert L. Crandall*

Cover: Investor George Soros of the Quantum Fund was photographed in his New York City office by Andy Freeberg.

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LETTERS

Concerning your recent article on America's money society, one might draw your attention to the curious fact that current English—or maybe American—usage refers to a person who *owns* a certain amount of money as one who is *worth* that amount. A culture that no longer distinguishes between what a man has and what he is, is perhaps intrinsically materialistic in its outlook.

BENJAMIN J. EGLI
Muttenz, Switzerland

A Puff of Smoke

Re "Don't Bet Against Cigarette Makers" (August 17): Your article extols the ability of the tobacco companies to project a very profitable future. However, you fail to mention that tobacco is one of the more unusual products in that it tends to addict its consumers. Anyone else selling such a product today would be known as a drug pusher.

CLIVE S. PEARCE
Haworth, New Jersey

Correction

In "Do We Live As Well As We Used To?" (September 14), FORTUNE *ran a table showing what work buys. The last three lines of that table contained typographical errors. Buying a chicken took 60% less work in 1986 than in 1956. The cost of dry cleaning a dress came to 39 minutes of labor in 1956, vs. 35 minutes last year. To pay for a haircut, a man had to work 15% less than 30 years before.* ■

Address letters to FORTUNE, Time & Life Building, Rockefeller Center, New York, N.Y. 10020. Letters may be edited for purposes of clarity or space.

INVESTOR'S SNAPSHOTS

EXPLANATORY NOTES

SALES in the Investor's Snapshots elsewhere in the magazine exclude excise taxes. Instead of sales, assets are shown for commercial banking companies, diversified financial companies, life insurance companies, and utilities, and operating revenues for transportation companies.

NET PROFIT includes any extraordinary items. Where applicable, sales and net profit for past quarters are restated to reflect mergers, acquisitions, or divestitures.

RETURN ON COMMON STOCKHOLDERS' EQUITY is calculated for the latest four quarters after subtracting dividends paid on preferred stock from net income. The five-year average is based on the last five full fiscal years.

PRICE/EARNINGS MULTIPLE is based on earnings per share for the latest four quarters.

TOTAL RETURN TO INVESTORS includes stock price changes and assumes dividends are reinvested on the date paid.

HOW THE 12 TOP RAIDERS RATE

Soaring stocks and a public backlash have revolutionized takeovers. Old players are fading, new ones rising. Here's a surprising scorecard from Wall Street.

■ *by Thomas Moore*

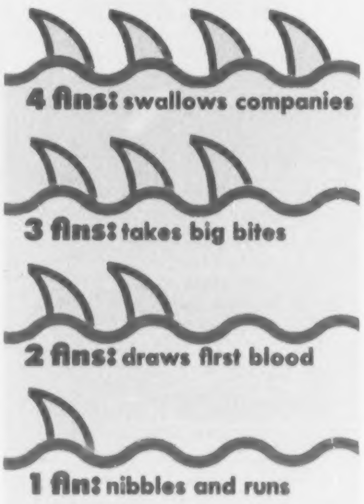
THERE SEEMS TO BE no stopping them. The financial sharks whose attacks have provoked a major restructuring of U.S. industry are ripping into more drifting corporations than ever, sometimes striking two or three at a time. The big fish have attracted a new wave of hungry rivals, and the schools of publicly traded companies they feed on are swimming increasingly scared.

But the days of the quick and easy chomp are over. In the past year the takeover hunt has changed significantly, worsening the risk-reward ratio for those who prey. The soaring stock market has made so-called undervalued companies much more expensive. Changes in the tax laws have soured the economics of liquidating and spinning off assets after a takeover, limiting the payoff. A recent change in the Hart-Scott-Rodino law, requiring raiders to disclose relatively small holdings in companies, diminishes the element of surprise. And a Supreme Court decision last spring sanctioned a spreading rash of state laws aimed at protecting local companies from hostile takeovers.

It gets worse. The Ivan Boesky scandal and other insider trading revelations have tipped the Great Takeover Debate against the raiders. Even more damaging, speculation that investment bank Drexel Burnham Lambert would be caught in the scandal impaired its junk bond financing capability—perhaps the biggest gun in the raiders' arsenal. Says Joseph Perella, co-head of mergers and acquisitions at First Boston: "All raiders, particularly those who don't have a lot of cash or equity, are less formidable today because Drexel is not promoting as many of their activities with letters claiming it is 'highly confident of obtaining financing.' That seriously limits their ability to do deals."

SHARK SCALE

A raider's score rises with his cash, credibility, and appetite.


4 fins: swallows companies
3 fins: takes big bites
2 fins: draws first blood
1 fin: nibbles and runs

JAVIER ROMERO

The takeover backlash and longer odds have knocked a few sharks out of the water. Victor Posner, 68, a pioneer corporate plunderer, was beached by the bankruptcy filing of Sharon Steel, his biggest conquest, and lawsuits alleging he milked companies he acquired. Some dispirited raiders are cashing in or looking overseas. The Bass brothers of Texas, after making over $850 million on their investment in Walt Disney Co., have split up their loot and gone separate ways. Maverick Asher Edelman, 47, is casting his nets in Europe and Brazil, where he says the economics are better and shareholders are treated more fairly.

A few raiders, after years of assailing the corporate establishment, are joining the club and trying to run big companies. Saul Steinberg, for instance, has settled down in middle age—he's 48—to tending his huge Reliance Group insurance empire and throwing dinner benefits for such classy causes as New York's Metropolitan Opera. Says a takeover lawyer: "The new religion is that you can make more money owning and operating companies than trading their stock."

Maybe, but most raiders have not yet been converted. Many are as active as ever, and several lesser-knowns are nosing into the game. Canadian Robert Campeau, 63, landed a whale of a company in Allied Stores last year and is looking for other U.S. companies. Sam Heyman, 48, took over GAF, almost nabbed Union Carbide, and seems eager to bite into something new. Dallas investor Harold Simmons, 55, picked up NL Industries last year and this year bought a chunk of McDermott International, a big engineering and oil services company.

Florida-based Paul Bilzerian, 37, has been in and out of Hammermill Paper, Allied Stores, and Pay 'N Pak. He is known on Wall Street as a reckless but effective trader who, even after making $115 million, still lacks enough money for a really big deal. Other promising newcomers: Washington, D.C.-based Arthur Goldberg, 45, ("could become a big player, but the jury is still out," says an investment banker), and reclusive English investor Alan Clore, who keeps even his age (in the early 40s) a secret.

A raider's reputation—a currency worth more than money—rises and falls with each deal. To determine how a dozen major raiders rate (see Shark Scale), FORTUNE informally surveyed investment bankers, arbitragers, takeover lawyers, and institutional investors. The benchmarks were credibility, financial clout, aggressiveness, savvy, and success in making money, both for themselves and shareholders.

REPORTER ASSOCIATE *Wilton Woods*

Belzberg Brothers

GRANITZ—DOWNE

Raider rating:	**1**
War chest:	**$200 million**
Net worth:	**$300 million**

BIG DEALS: Scovill, 1985, $540-million investment; Gulf, 1984, $70-million profit; Bache Group, 1981, $40-million profit.

THE BELZBERGS—from left, Hyman, 62, William, 55, and Sam, 59—got a bad rap when they descended from Alberta in 1980 to scare Bache into the arms of Prudential. Bache executives spread unsubstantiated stories about the Belzbergs' alleged ties to organized crime—seems U.S. Customs agents spotted Hymie socializing with Mafiosi in Acapulco—and they've never been able to dispel the sleazy image.

The sons of a Polish immigrant who made a small fortune in used furniture, the Belzbergs are led by middle son Sam, who built up the family's cash by trading oil and gas leases in Canada. The brothers used their notoriety from the Bache episode to put a string of companies, including Potlatch and Ashland Oil, in play. When the target managements offered them extra money for their shares—greenmail—the brothers took it. They've also joined raids led by Carl Icahn (Phillips Petroleum) and Boone Pickens (Gulf).

In the past decade the Belzbergs have taken over only one major company, Scovill, the Connecticut-based industrial conglomerate. They recently recovered their $540-million investment, but have lost money on other deals including H.H. Robertson, a construction company, and Century Capital Associates, an investment management firm. Arbitragers distrust them because they accept greenmail. Investment bankers consider them mainly financial opportunists, and not particularly good ones. Says one: "They overpaid for the one company they bought, and they're nickel-and-dime artists on everything else."

BIG DEALS: Allegis, 1987, $230-million paper profit; Viacom International, 1985-86, $61-million profit; Storer Communications, 1985, $39-million profit.

CONISTON is the new name in town. The three principles—from left, Gus Oliver, 37, Keith Gollust, 42, and Paul Tierney Jr., 44—have yet to take over a company. Instead they engage in what they call "strategic block investing." They buy big positions in companies with assets they consider undervalued by the stock market, and then they try to influence management to restructure and thus boost the stock's price. Says one takeover lawyer: "They're not in it to operate. They hope something happens."

The partners get high marks for investment savvy, doing their homework, clever proxy tactics, and brilliant timing. Their triumph over Allegis this spring lifted the group into the first tier of corporate raiders. The trio played a key role in pressuring the company's board to dump Chief Executive Richard Ferris and sell off Westin Hotels and the Hertz car rental operation rather than meld them with United Airlines into a grand travel empire, as Ferris wanted. The stock took off from around $60 to over $90, and Coniston, which is still holding on to its investment, clearly thinks it will go higher.

"People don't think they're raiders because they're young and smile a lot, but ask Storer Communications, or Richard Ferris at Allegis," says one dealmaker. "Coniston took them to the wall." The only factor keeping the partners from a higher rating is money. Much of the $700 million they manage is tied up in current deals, restricting their scope to only a few plays at a time.

Coniston Partners

MARIA ROBLEDO

Raider rating:	**3**
War chest:	**$700 million**
Net worth:	**$80 million**

Asher Edelman

J. P. LAFFONT—SYGMA

Raider rating:	**2**
War chest:	**$500 million**
Net worth:	**$100 million**

BIG DEALS: Burlington Industries, 1987, $65-million profit; Ponderosa, 1987, $300-million investment; Fruehauf, 1986, $21-million profit.

A TAUT, ATHLETIC MAN who looks as if Ralph Lauren dresses him personally, Edelman, 47, is the first to admit he is a something of an enigma on Wall Street. Mention his name to an investment banker and you are likely to get a guffaw. Best not to mention it to arbitragers because many of them have lost money on him. "He's a minus 20," says one coldly. "You can't trust the guy." Other critics, who concede he is bright, complain he thinks too highly of himself and won't listen to advice. A takeover specialist says: "He's a loose cannon who is all over the lot."

Still, Edelman commands begrudging respect for spotting undervalued companies and hanging in there, even when he runs into trouble. Edelman is an asset player who used to buy a big position in a company and then persuade management to sell off divisions, on the often valid theory that the parts are worth more separately than together. He scored with a New York real estate holding company and a small New Jersey computer company but quickly ran into trouble when he tried to duplicate the feat in 1984 by buying into two more computer firms. Both had a raft of unseen problems that he is still trying to solve.

Undaunted, Edelman now professes that owning and operating companies can be more profitable than liquidating them. Recently, though, he has made more money from quarry that got away (Burlington Industries) than those he has won (Ponderosa). He has also taken up teaching at Columbia University's School of Business. His course: Corporate Raiding—The Art of War.

continued

Sir James Goldsmith

J. DONOSO—SYGMA

Raider rating:	**4**
War chest:	**$800 million**
Net worth:	**$1 billion**

BIG DEALS: Goodyear, 1987, $90-million profit; Crown Zellerbach, 1985, $580-million investment; Diamond International, 1980, $500-million profit.

SUAVE, IMPOSING Jimmy Goldsmith, 55, ranks among the smartest and heaviest-hitting corporate raiders. In addition to brains, money, and track record, Goldsmith gets credit from the takeover fraternity for charm and class—qualities that have made him more acceptable to the boards of target companies than abrasive raiders like Carl Icahn. Goldsmith fills his residences in Manhattan, London, Paris, and the Spanish countryside with elegant tapestries and fine art, and for years made no secret of his unusual domestic arrangements: a wife and two children in Paris and a mistress and three children in London (he eventually divorced, and married the mistress).

When Goldsmith recently sold off much of the multinational empire he built in finance, publishing, forest products, and food, he said he was tired of management. But financial observers say he is worried about political attacks on takeovers in the wake of the Boesky affair and the possible collapse of highflying stock markets worldwide. At a congressional hearing on his proposed takeover of Goodyear last fall, he warned that the U.S. was in danger of catching what he calls the European disease: "a triangular alliance of big unions, big government, and big management."

This year Goldsmith discussed investing in Pan Am at the urging of the troubled airline's unions, but Wall Street insiders say he is quiescent for the moment. "He looks like a bearish investor who is cashing in," says one money manager. Another notes, however, that he is sitting on a lot of cash: "If he wants to go, get out of his way."

Herbert Haft

RHODA BAIR

Raider rating:	**2½**
War chest:	**$700 million**
Net worth:	**$500 million**

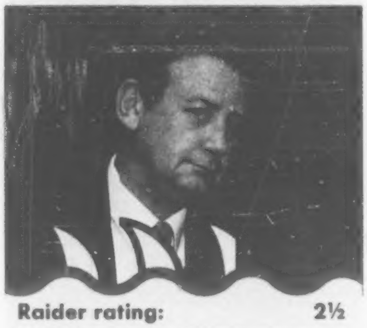
BIG DEALS: Supermarkets General, 1987, $40-million profit; Safeway, 1986, $140-million profit; Jack Eckerd, 1985, $9-million profit.

THE HAFTS of Washington, D.C., are puzzling but promising comers in the raiding game. The son of a pharmacist, Herbert, 66, pioneered the concept of discount drugstores and developed a major local chain, Dart Drugs. His son Robert, 35, a graduate of the Harvard Business School, applied the same discount concept to books, building Crown into America's third-largest bookseller.

At the peak of the expansion in discount retailing in 1984, Herbert sold Dart Drug to its management for $160 million and launched a series of raids on national retailers. Terrified of Haft's cheapskate reputation—he was known for paying bills late and undermanning his stores—most of his targets chose to go private rather than surrender. Says one M&A chief: "He ran that drugstore chain down the tubes and then he sold it to his own people, who overpaid for it."

Haft is a little eccentric. Married to a beautician, he styles his shock of white hair into an eye-popping pompadour; he won't talk to the press, and last year tore down a $1-million Tudor mansion he bought in Washington so he could build a grander $4-million house in its place. While he has failed to take over any of his targets, he has pocketed millions in trading profits and earned a reputation for accepting greenmail. Wall Street has only recently begun taking the Haft father-and-son team seriously and pegs them primarily as speculators. "They say they want to own and manage companies, but they're real estate guys at heart," says a takeover lawyer. "They always stop a couple bucks short when a company wants to get sold."

Robert Holmes à Court


JOHN HAY

Raider rating:	**2½**
War chest:	**$1.1 billion**
Net worth:	**nearing $1 billion**

BIG DEALS: BHP, 1987, $1-billion paper profit; Texaco, 1987, $180-million paper profit; Herald & Weekly Times of Australia, 1986, $70-million profit.

THE INTENTIONS of Holmes à Court are as mystifying to most investors as his nomad background. His father was a British migrant worker in South Africa who ended up with a farm in Rhodesia. Holmes à Court (the Anglo-French name dates to the Norman Conquest) studied agriculture in New Zealand and law in Western Australia, only to drop his practice in Perth, where he still lives, to pursue big-time investing around the world. His specialty: troubled companies.

Holmes à Court built his fortune by turning around a government-subsidized wool mill, an ailing supplier of construction equipment, and various media holdings in Australia. A patient hunter, he has been stalking Broken Hill Proprietary, Australia's biggest company, for six years and today owns about 30%. Like Rupert Murdoch, Holmes à Court moved on to big game in Britain and the U.S. He took over Associated Communications from Sir Lew Grade for $80 million, then sold rights to Beatles' songs carried on the books at $5 million to Michael Jackson for $40 million. In the U.S. he has taken positions in Asarco (12%), USX (under 5%), and most recently Texaco (9.4%).

A soft-spoken recluse who collects art, Rolls-Royces, and race horses, Holmes à Court gets a middling rating as a raider on Wall Street, largely because people can't decide whether he is for real. "He's more of an investor than a raider," says one money manager. "He's very smart, but he spreads himself too thin," says an investment banker. "If he went for manageable targets, he would gain credibility and could become a major player."

continued

Carl Icahn

JOYCE R[illegible]D

Raider rating:	**4**
War chest:	**$1 billion**
Net worth:	**$200 million**

BIG DEALS: TWA, 1986-87, $100-million paper profit; USX, 1986, $100-million paper profit; Union Carbide, 1986, $40-million profit.

GETTING STUCK with TWA could have been the best thing that ever happened to Icahn, 52, the mild-mannered New York suburbanite who apparently loves to be hated. Up until his dogfight with the airline last year, he had perfected the hostile takeover bid into what has become the textbook corporate raid, making millions for himself and co-investors along the way. Typically he would buy into a company, bang the drums about mismanagement, threaten a takeover bid, and then either sell out as the company's stock price rose or accept a buyout or greenmail offer. Unlike other raiders, Icahn has a thick skin about the G word. "Carl is in it for Carl," says another raider. "His favorite quote is, 'If you want a friend, buy a dog.' "

A dog is just what troubled TWA looked like after Icahn's junk bond financing fell apart in the wake of the Boesky scandal. Rather than bail out at a loss, Icahn soon proved he was as good a manager as a corporate critic. TWA reported record operating profits for this year's second quarter, and Icahn now proposes to take the company private in a $1.2-billion deal that would give him back his $440-million investment, plus 90% of the company.

That coup has sent Icahn's own stock soaring on Wall Street. Ironically, his success at TWA may change his status from vilified raider to member in good standing of corporate America. Complains one arbitrager, who downgraded Icahn from a 4 to a 3 because of his new management role: "He's less of a factor now because he's too wrapped up in TWA."

BIG DEALS: Bekins, 1986, $90-million investment; Walt Disney, 1986, $28-million profit; AMF, 1985, $560-million investment.

IN THE RAIDING BUSINESS you're only as good as your last deal. Irwin Jacobs's latest transaction was selling his chief investment conglomerate, Minstar, a hodgepodge of companies whose stock price has been flat, to one of its subsidiaries, Genmar, a profitable boatmaker. The result: Minstar's stock picked up and Genmar's slid—not the kind of stuff that excites Wall Street. The deal seemed to sum up Jacobs's current status. He has been churning up as much water as usual but doesn't seem to be getting anywhere. In August he splashed around Gillette and McGraw-Hill.

Jacobs made a name for himself—Irv the Liquidator—buying failing companies and liquidating their assets for million-dollar profits. His reputation grew when he took over AMF, the well-known sporting goods company. But he started to make a habit of taking big stock positions in companies, sending threatening letters to their managements, and then selling out as the stock price jumped, often pocketing greenmail in the process. As a result, many Wall Street insiders think of him primarily as a trader, and not always a good one. Says one arbitrager, remembering Jacobs's ill-advised investment in Tidewater, an oil and gas company: "It's tough to buy a stock at $25 a share and have it go to $5." A college dropout, Jacobs gets a low rating on smarts from some Wall Street pros but scores high on sheer aggressiveness. Says one sharp-tongued dealmaker: "He's thick in the neck and narrow in the brain." Another calls him a bull in a china shop: "There's no rhyme or reason to anything he does."

Irwin Jacobs

STEVE WOIT—PICTURE GROUP

Raider rating:	**1½**
War chest:	**$750 million**
Net worth:	**$200 million**

Ronald Perelman

ROB KINMONTH

Raider rating:	**3½**
War chest:	**$1.6 billion**
Net worth:	**$300 million**

BIG DEALS: CPC International, 1986, $94-million profit; Pantry Pride, 1985, $60-million investment; Revlon, 1985, $1.8-billion investment.

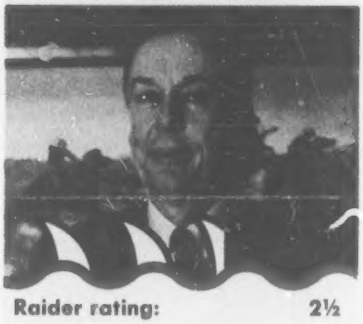
THE CIGAR-SMOKING CHAIRMAN of Revlon recently pulled into the takeover fast lane, scooting up to become one of the most respected and aggressive raiders around. In the past year he made passes at Transworld, the restaurant and hotel chain, CPC International, the food processor, and—three times—Gillette, the razor and toiletries company. He is a tough and tenacious negotiator who holds on until he gets what he wants.

The son of a wealthy sheet-metal manufacturer from Philadelphia, Perelman ran his father's firm for a couple of years before striking off on his own in New York, where he bought control of his first company, a jewelry distributor. Other acquisitions followed in quick succession. Perelman, 44, is a leveraged-buyout artist who goes after companies he considers overdiversified, with high cash flows and low stock prices. Once in control, he sells off the divisions and assets he deems superfluous and beefs up the core business.

Perelman is married (for the second time) to gossip columnist Claudia Cohen, who has helped the once publicity-shy executive develop a celebrity profile. Their wedding party took place at the Palladium, a chic Manhattan dance club. "He came out of nowhere and has proven himself to be a very smart businessman who pays close attention to what he is doing," says Ronald Freeman, co-head of Salomon Brothers' mergers and acquisitions department. Adds Robert Willard, the M&A chief at Prudential-Bache: "He is perceived as someone who wants to buy and control assets rather than just trade them."

continued

T. Boone Pickens



GEORGE LANGE—OUTLINE

Raider rating:	**2½**
War chest:	**$1 billion**
Net worth:	**$110 million**

BIG DEALS: Phillips Petroleum, 1985, $89-million profit; Unocal, 1985, $83-million profit; Gulf, 1984, $218-million profit.

BOONE should have stayed in the oil patch. His simultaneous attacks this summer on defense contractors Boeing and Singer, followed by a $5.6-billion bid for Newmont Mining, have confused Wall Street and undermined his credibility. His rating has slipped sharply as a result. The consensus seems to be that Pickens, 58, is having trouble meeting the $50-million annual dividend obligation of Mesa Limited Partnership, which he heads, and consequently is looking to shake some trees for quick stock-trading profits. Says one M&A specialist: "He's a desperate man."

A fitness buff and sportsman, Pickens hunts quail on his Texas Panhandle ranch, plays racquetball, prides himself on his poker, and hates smoking—he has a habit of snatching cigarettes out of employees' mouths and stubbing them out. One dealmaker notes Pickens has been less formidable since he stopped working with well-known takeover lawyer Joseph Flom, and concludes: "Boone's been out of it for two years, and now he's playing a shill game—not very successfully. The last big company he tried to get, Diamond Shamrock, blew him away."

Takeover specialists show a tinge of disappointment that such a colorful and popular Wall Street hero has fallen from grace. "Pickens did the nation a real favor over the last five years when he forced the oil industry to consolidate against its will," says a dealmaker. "But he is the archetype of the corporate raider who never bought anything. In the last few weeks he has totally undercut his image. I don't know what the hell he's doing."

Donald Trump

MICHAEL O'NEILL—OUTLINE

Raider rating:	**1**
War chest:	**$600 million**
Net worth:	**nearing $1 billion**

BIG DEALS: Resorts International, 1987, $101-million investment; Allegis, 1987, $72-million profit; Holiday, 1986, $38-million profit.

IT WAS PERHAPS INEVITABLE that Donald Trump, 41, would be drawn to the takeover wars. The attention-seeking New York master builder likes action, has made a ton of money, and fancies himself the world's best dealmaker. While he was erecting luxurious skyscrapers in Manhattan and, later, glittering casinos in Atlantic City—many of which bear his name—the business press covered him only scantily as it was hyperventilating over the new swashbucklers of the 1980s, the corporate raiders.

Trump is no dummy when it comes to promotion. He tested the waters in Atlantic City, making passes at Holiday Corp. and Bally before buying Resorts. He also dabbled in such companies as American Can and RCA. "It was just too easy," he said. "I buy stock—and boom." He made his biggest killing on Allegis, acquiring shares at $30 and selling out a few months later at $65—too soon, as it turns out, since the stock recently traded over $90.

With drive, money, and a real estate man's eye for asset values, Trump appears to possess all the qualifications of a big league raider. But the consensus on Wall Street is that he lacks credibility. His recent political statements, stirring up rumors he may run for President, haven't helped. "I don't have the slightest idea what he's doing," says one takeover lawyer. "He's in and out, in and out. It's hard to separate the man from the publicity." Says an arbitrager: "He's out for Donald Trump. He will sell his position out, take greenmail, and he doesn't care what happens to other shareholders."

Sir Gordon White

ANDY FREEBERG

Raider rating:	**4**
War chest:	**$6 billion**
Net worth:	**$40 million**

BIG DEALS: Kaiser Cement, 1987, $200-million investment; SCM, 1986, $930-million investment; U.S. Industries, 1984, $533-million profit.

HANSON TRUST, a relatively obscure Anglo-American holding company run by Lord Hanson in England and his dapper partner, Sir Gordon White, in the U.S., has built up a war chest of over $6 billion—rivaling Ford Motor Co.'s $9.1-billion hoard. That fact alone makes Hanson Trust one of the most daunting raiders in the business. And unlike Ford, which concentrates on building cars, Hanson Trust focuses mainly on acquiring companies.

In the past two years the company has doubled revenues to $6.2 billion by buying mismanaged nuts-and-bolts firms with dependable cash flows, lots of salable assets, and low price-earnings ratios. Generally Hanson Trust sells some assets to reduce debt and holds others it thinks it can turn into winners by cutting costs. Sir Gordon, 64, a voluble playboy who has been divorced three times and dates actresses and models, says the company's aim is to become Britain's largest conglomerate and one of the 50 biggest in the U.S. (it is now ranked 97 on the FORTUNE 500). Lately finding low-priced companies has been difficult, though not impossible. In August, Hanson announced a $1.8-billion deal to acquire Kidde, which makes everything from kitchen pots to Jacuzzis.

White has dropped hints he is prowling for something a lot bigger that could double Hanson Trust's revenues overnight. Seeing a track record like his, Wall Street takes Sir Gordon at his word. One investment banker says: "Everything they've gone after, they've acquired. And they haven't overpaid."

THE FORTUNE

In an exclusive survey—first of a series—America's top executives reveal their views

TERRY LEE—BLACK STAR

AM's Banta

MARIA ROBLEDO

Avon's Waldron

HEINZ KUGLER

Enron's Lay

ANDREW POPPER

Texaco's Kinnear

THE TYPICAL chief executive of a FORTUNE Industrial 500 or Service 500 company is convinced of a couple of things: There will *not* be a recession next year and inflation will *not* get out of hand in 1988. Yet he is no more certain about the stock market than most people, thinking it is nearly as likely to go up as to go down in the next 12 months. His views on executive succession may discourage female aspirants. Ability notwithstanding, the CEO would be willing to bet a cigar or two that, alas, no woman will be boss of his company by the year 2000.

These are among the results of the first FORTUNE poll of more than 100 CEOs. The survey will be conducted several times a year on a variety of questions.

The executives were also asked to suggest what the U.S. should be doing to improve its international competitiveness. Their replies, often passionate, were summed up by Merle H. Banta of AM International, the office machine and computer company. Says he: "It's not a single policy. It is a whole array of things. It is trade policy, the deficit, the tort system and environmental laws, corporate policies, and the educational system. If we don't remain competitive, our children will suffer—they will have a lower standard of living than we did."

The respondents were selected from among the largest companies in each industry in the FORTUNE 500 and the Service 500. The methodology used makes the results reliable and projectable, meaning they are as valid as if all 1,000 CEOs had been interviewed. The telephone poll was conducted for FORTUNE by Clark Martire & Bartolomeo Inc., an independent opinion research firm, from August 10 to 14.

Of the major economic issues facing executives, no two are more important than recession and inflation, which can mangle budget and production forecasts. Fully 84% of the CEOs polled did not see a recession—that is, two consecutive quarters of decline in real GNP—by the end of 1988. In all, 81% agreed that inflation would not top 6% next year. Those opinions concur with FORTUNE's forecast, which bars the recessionary wolf from the door at least through 1988 and sees inflation averaging 5.5%.

The CEOs' faith in the economy did not necessarily extend to stocks. In all, 50% said the market would be lower a year from now; 42% believed it would

Q RECESSION	A	
Do you expect a recession—that is, two or more consecutive quarters of decline in real GNP—by the end of next year?	NO	**84%**
	YES	**13%**
	NOT SURE	**3%**

Q INFLATION	A	
Do you expect inflation, as measured by the consumer price index, to be more or less than 6% next year?	LESS THAN 6%	**81%**
	MORE THAN 6%	**12%**
	ABOUT 6%	**7%**

Q THE MARKET	A	
Do you expect the stock market to be higher or lower a year from now than it is now?	LOWER	**50%**
	HIGHER	**42%**
	ABOUT THE SAME	**4%**
	NOT SURE	**4%**

Q WOMEN	A	
What are the chances of a woman becoming CEO of your company by the year 2000?	POOR	**40%**
	FAIR	**40%**
	GOOD	**20%**

500 CEO POLL

on inflation, recession, women at the top, and more. ■ *by Bill Saporito*

be higher. The Dow Jones industrial average hit 2690 the week of the interviews. (For an analysis of the new forces behind stock values, see the cover story.)

What is the major impediment to U.S. competitiveness abroad? The CEOs' favorite villain is Washington. When asked in an open-ended question to suggest ways to improve competitiveness, 28% responded that the federal government should interfere less with business. "We need less U.S. government intrusion and regulations on the business of American firms," says Leslie McCraw of Fluor Daniel, an engineering and construction company. George M. Keller of Chevron echoes the sentiment: "We have to get unregulated. We are commercial industries, not instruments of foreign policy, and we are not political animals." John McConnell of steelmaker Worthington Industries insists, "The government should either reduce Environmental Protection Agency requirements or help finance them."

Despite their complaints, the executives see several legitimate roles for government, particularly in promoting free trade. That was cited by 19% of the respondents as something the government should do to improve competitiveness. When trade is not free, they want the odds evened, as Rubbermaid's Stanley C. Gault explains: "We need to get a trade bill at the federal level that addresses the improper and unfair trading practices between the U.S. and its major trading partners. We don't have a fair and free opportunity. Our market is open to any producer, yet in many cases their markets are virtually closed to American products." Even so, without prompting, a third of the CEOs declared themselves free marketers opposed to outright protectionism. As John Hayes of National Gypsum Co. says, the government should "break down protectionist barriers and not permit any new protectionist barriers."

Decreasing the deficit and balancing the budget are also among the executives' favorite prescriptions, with about 19% mentioning them. Many CEOs see debt reduction as the first step of a two-part program, the second being either market intervention by the Federal Reserve to weaken the dollar still further in order to enhance exports, or more incentives to encourage capital formation and growth. "Restore the tax incentives that were taken away by tax reform, such as the investment tax credit," implores Milton H. Ward of Freeport-McMoRan, a mining company. "We need to build incentives for the development of new companies."

While many of these business leaders agree that deregulation and deficit reductions are the government's best weapons to help business, Kenneth L. Lay of Enron Corp., a natural gas company, would change the whole tax system. "We should be shifting to the value-added tax, comparable to the European market's, as opposed to a corporate income tax," he says.

The CEOs had less to say about what business should do on its own to improve its competitiveness. Most important, many assert, is increasing productivity, mentioned by 16% of the group, and cutting costs, cited by 11%. Hicks B. Waldron of Avon argues that "raider activity is hurting our productivity and competitiveness." Nearsightedness is another problem, says James Kinnear of Texaco: "The pressures associated with short-term earnings results tend to reduce the amount of money spent on R&D, which is an inherently long-term process." William J. Popejoy of Financial Corp. of America sums up, "We must compete through research and development to make cheaper and better products. The key is to provide the cheapest product with the best quality. If we fail to do this, we will fall further behind."

By any measure, it's a healthy sign when increased productivity comes through as the executives' principal goal. And, as indicated in FORTUNE Forecast, there is already surprising and heartening progress in manufacturing productivity. ■

Q COMPETITIVENESS

What should the U.S. be doing to improve its international competitiveness?

A (MOST FREQUENT RESPONSES)	
REDUCE GOVERNMENT INTERFERENCE	**28%**
PROMOTE OR MAINTAIN FREE TRADE	**19%**
BALANCE THE BUDGET OR DECREASE THE DEFICIT	**19%**
INCREASE PRODUCTIVITY	**16%**

BRUCE DAVIDSON—MAGNUM

Worthington's McConnell

ANDREW POPPER

Gypsum's Hayes

Rubbermaid's Gault

ROBERT HOLMGREN

Chevron's Keller

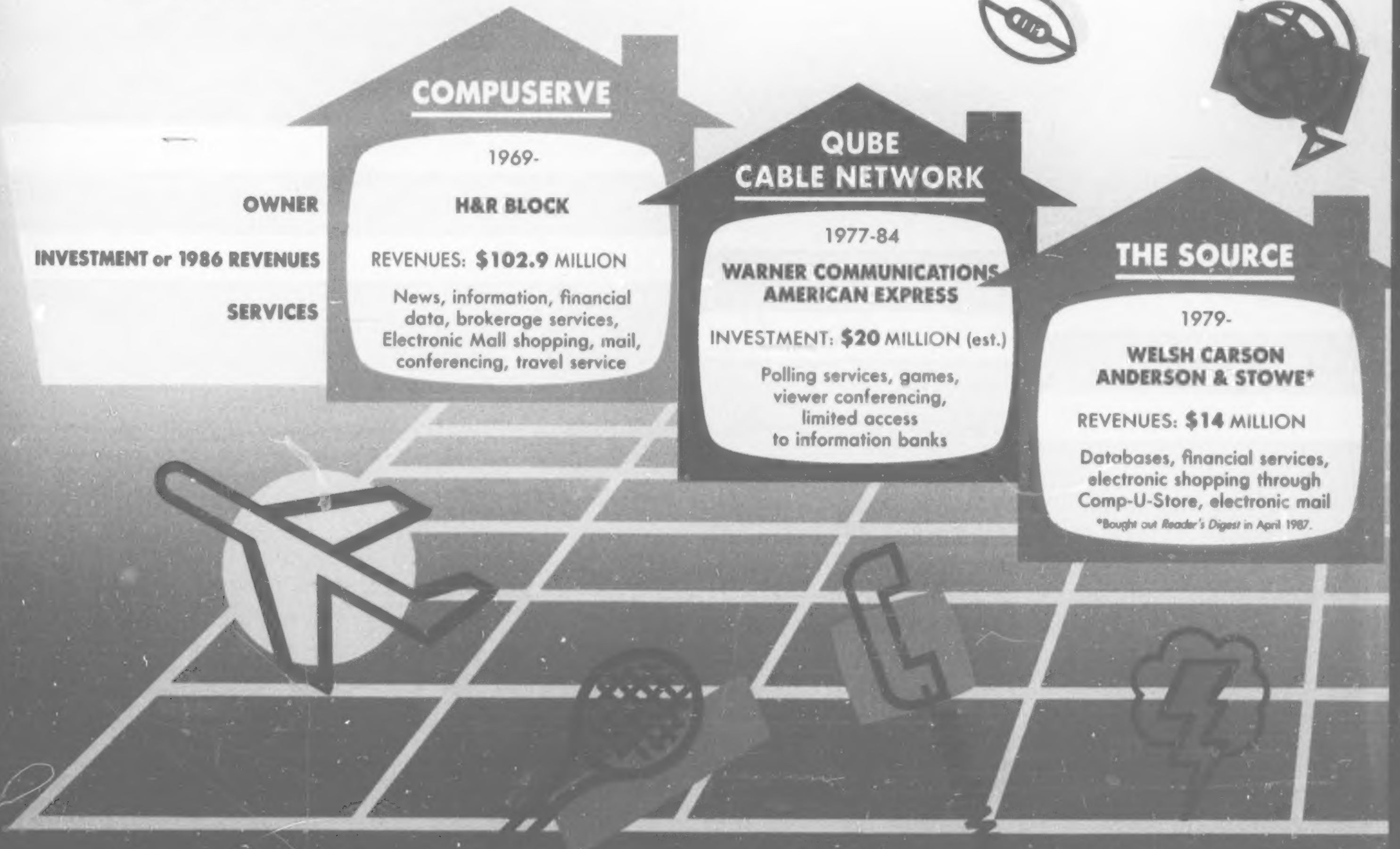
ARE IBM AND SEARS CRAZY? OR CANNY?

In a gamble on the future, the two giants have invested $250 million to deliver services to consumers by personal computer. It looks more like a bust than a bonanza. ■ *by Bill Saporito*

A LOT OF COMPANIES with high hopes and deep pockets have lost money on videotext services over the years, and the few successes have been modest at best. The idea behind videotext is intriguing: Provide consumers with easy electronic ways to get information, buy goods and services, and pay their bills. Now two companies with pockets that reach to their ankles are in the game—IBM (1986 sales: $51.3 billion) and Sears ($44.3 billion). They have already sunk an estimated $250 million in a joint venture they call Trintex, and stand to throw in millions more—with no great demand yet in sight.

Success would mark these managers as visionaries on Wall Street, of course, but other giants have cut and run from videotext investments. CBS, an early partner in Trintex, was unwilling to wait for the pot of gold IBM and Sears expect to find in the next decade, and pulled out after dropping $40 million. In 1983, after spending some $25 million experimenting with a teletext system using home TV screens, Time Inc., FORTUNE's publisher, decided not to proceed, and in 1986 it withdrew from Covidia, in which it was a 5% partner in a joint venture with AT&T and Chemical Bank to deliver banking services and entertainment listings.

VIDEOTEXT MARCHES ON



	COMPUSERVE	QUBE CABLE NETWORK	THE SOURCE
	1969-	1977-84	1979-
OWNER	H&R BLOCK	WARNER COMMUNICATIONS AMERICAN EXPRESS	WELSH CARSON ANDERSON & STOWE*
INVESTMENT or 1986 REVENUES	REVENUES: **$102.9** MILLION	INVESTMENT: **$20** MILLION (est.)	REVENUES: **$14** MILLION
SERVICES	News, information, financial data, brokerage services, Electronic Mall shopping, mail, conferencing, travel service	Polling services, games, viewer conferencing, limited access to information banks	Databases, financial services, electronic shopping through Comp-U-Store, electronic mail

*Bought out *Reader's Digest* in April 1987.

What draws IBM and Sears on is the same old dream that other videotext pioneers found so enticing and costly, of a world in which computer-based communications systems will be as ubiquitous as today's telephone. To turn dream into reality, hundreds of programmers and technicians have labored monklike for nearly three years in a nondescript office building in White Plains, New York, developing a product that is still about a year from coming on the market. (The product is so secret that FORTUNE was not allowed to photograph the monks at work.) The sorry history of the business does not discourage Theodore C. Papes Jr., a former boss of IBM's European operations who is CEO of Trintex. Says Papes: "We're creating something so compelling that you'll say, 'I've got to have it.' "

The product in this case is called Prodigy, described by Trintex as an "interactive personal service" and generally known as a public-access videotext (PAV) network. It's an on-line computer service—that is, you call it up—that lets you both send and receive data over a telephone line, with the aid of a modem. Hartford will get Prodigy sometime next year, with Atlanta, San Francisco, and Boston most likely to follow. The company will charge about $10 to $15 a month for the service, roughly the price of cable television. Trintext hopes to have a nationwide system in place in three years.

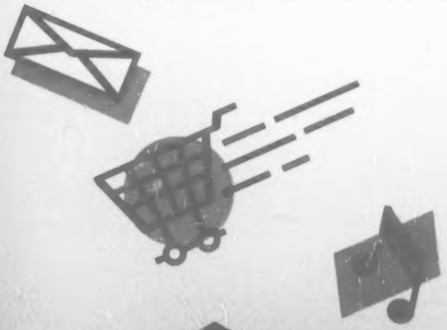
Prodigy expects to collect most of its revenue by sending to users commercial messages from 60-odd advertisers such as GMAC and Levi Strauss, which have signed up with Trintex for its initial run. Advertisers will pay fees based on the number of customers who actually receive a message on their screens. That degree of accuracy in measuring exposure to an ad has previously been unattainable. Prodigy will also allow advertisers to target users: for example, female runners under 35 who buy champagne.

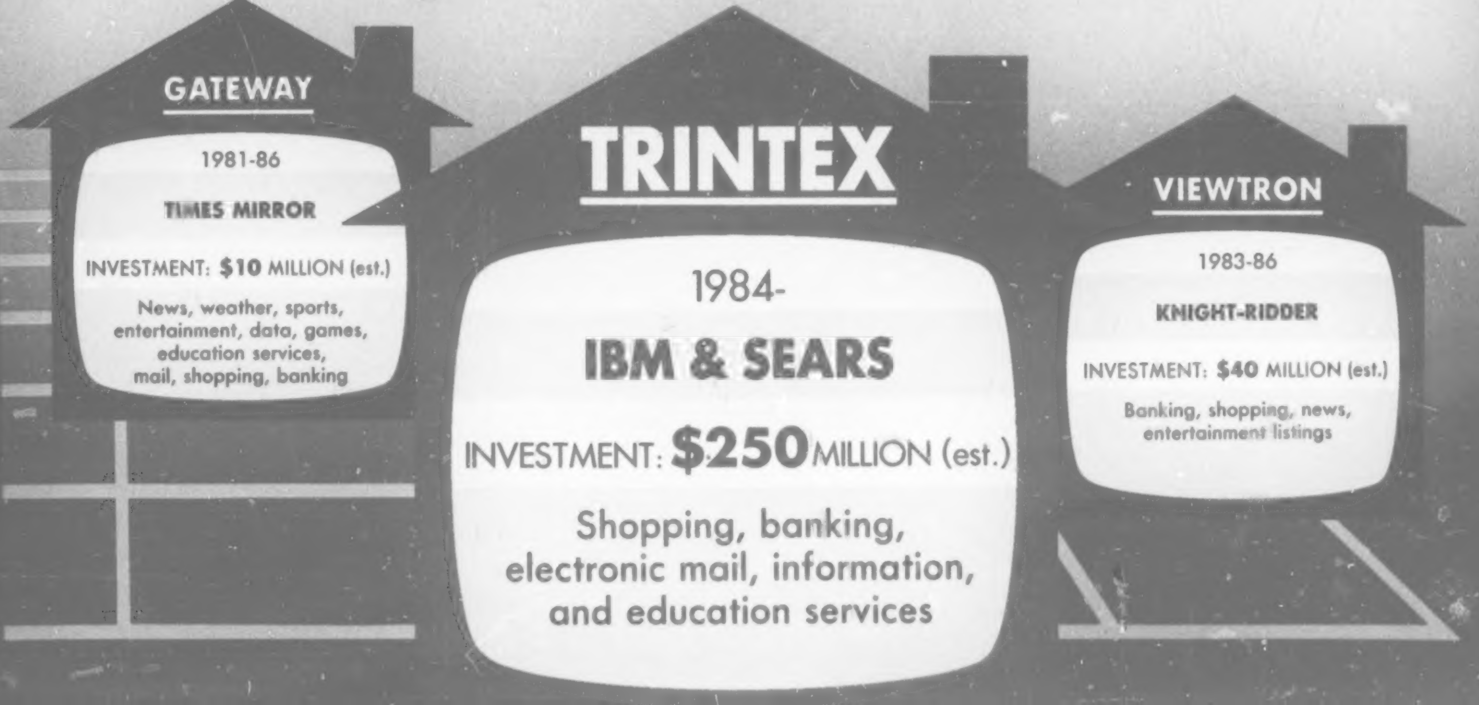
The system Trintex is building is huge—designed to handle ten million subscribers—and expensive. With about 600 full-time employees plus a host of loaners from IBM, Trintex can succeed only by making Prodigy a mass-market whiz in what has been a niche business. Other on-line companies such as the Source, CompuServe, QuantumLink, and Dow Jones News/Retrieval sell their services to one or both of two kinds of consumers: computer nerds who love to play games, write programs, and talk to fellow nerds, and information junkies like journalists and investors who can't bear to be out of touch with the greater world. All together these services have about a million users.

Prodigy is an extraordinary attempt to prove that the theory behind interactive systems is sound and that only proper execution was lacking during the adolescence of personal computers in the early 1980s. Lots of smart people were predicting then that the PC would become the new focal point for all kinds of transactions and information. The technology was available, a market of sorts existed, but, as analysts say, the systems lacked value-added utility. In other words, videotext didn't do squat for most people.

TO TRY to add value, Trintex will offer a jazzy graphics package and an easy-to-operate—okay, user-friendly—program that doesn't force the viewer to run through enough commands to set up a moon shot when he just wants the weather map. Prodigy is designed to use only five to eight command words displayed along the bottom. "We drag people in off the street, give them 30 seconds of instructions and see if they can get going on the system, and generally they can," says Harry E. Smith, senior vice president of commercial marketing. One of the commands, called Path, lets the operator cruise along a previously selected list of service items. Subscribers can elect to get the news first, the grocery store next, their bank account third, and so on, by making just one keystroke per step. There is no need to go to a master menu each time and then through another series of commands just to view a single section. This "personalization" by the user is what Trintex executives believe will make the system attractive.

Subscribers will need powerful machines to use Prodigy because it sucks up enormous




GATEWAY
1981-86
TIMES MIRROR
INVESTMENT: $10 MILLION (est.)
News, weather, sports, entertainment, data, games, education services, mail, shopping, banking
TRINTEX
1984-
IBM & SEARS
INVESTMENT: $250 MILLION (est.)
Shopping, banking, electronic mail, information, and education services
VIEWTRON
1983-86
KNIGHT-RIDDER
INVESTMENT: $40 MILLION (est.)
Banking, shopping, news, entertainment listings

amounts of computer capacity: To produce a full-screen image of near-photographic quality can take more than 64,000 (64K) bits of information—the entire memory of many lower-priced computers. Initially a subscriber will have to own an IBM or compatible PC that can store 256,000 (256K) bits of information in its memory. The user will also need a modem, a color monitor, and a graphics card—an electronic device that allows the monitor to display illustrations. Right now that relatively high-powered setup requires at least a $1,200 investment.

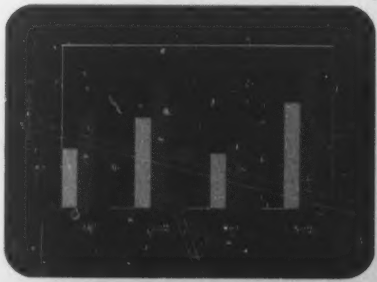
THE PLANK to which Trintex is nailing its business plan is the same one that supported the hopes of previous failures. With other pioneers, IBM and Sears believe that the number of homes giving shelter to a personal computer will increase exponentially as the price of the technology continues to slide. Today more than ten million U.S. households have one. But most of these machines are not powerful enough to use Prodigy, and fewer still have a modem. To break even, Prodigy will need several million subscribers. The company believes that it will have a chance to get them when the price of computer, modem, and color monitor is under $1,000, and that a true mass market will develop when the price drops below $500. Trintex isn't saying when it expects to see the $500 average, but CompuServe, another on-line network, forecasts 13 million homes will have computers *with* modems by the end of 1992.

Even if they do, will the occupants want a shopping and information service? Experience indicates most will not. Says Martin Nisenholtz, director of interactive media for Ogilvy & Mather: "Videotext was born of technology, not of any particular need. The challenge is, and has been, to provide a service that is attractive to consumers. It is as simple as that."

The predicament goes back to videotext's earliest days. The pioneer Qube, a joint venture of American Express and Warner Communications, got gobs of publicity but few users. The problem persists. American Airlines recently turned down an invitation to invest in Trintex, though Prodigy customers will be able to use American's Eaasy Sabre reservation system. Eaasy Sabre has been available to consumers on several videotext services for the past 18 months. The results have been unimpressive, says Max Hopper, the airline's vice president of information systems. Even consumers who have access to Eaasy Sabre find it more convenient to pick up the phone and call the airline the old-fashioned way.

Computer owners have not proved to be prodigious shoppers. Despite catalogues and television shopping networks, about 90% of all retail sales are still made in stores, according to Touche Ross. The accounting firm projects that nonstore sales will account for no more than 20% of the total in a decade. Gateway, owned by Times Mirror, offered an electronic shopping service that "went to hell in a handbasket," recalls James Holly, who ran Gateway. "Our customers just had no interest in general shopping." CompuServe says its Electronic Mall service is successful, as does CompuCard, another shop-by-computer system, but neither service has many subscribers. Nancy Beckman at the

To get Lotus 1-2-3 to do all this more quickly and easily, we didn't make it more powerful.



To graph sales by district from January to March just request ***"graph Jan to Mar."***

These ***macros*** *are made of Lotus HAL requests. Easy to write. Easy to understand. Easy to test.*

Say you want to extract specific information from a database. In this case, simply request ***"who has sales ≥ 8000."***

You can sum up sales figures with Lotus HAL, by requesting ***"total all rows."*** *1-2-3 and Lotus HAL will create the formulas.*

Source puts it succinctly: "We suspect Trintex is making a big mistake putting too much emphasis on the shopping."

The things computer users seem to like to do are play games and talk to other users. QuantumLink, a small but profitable on-line service for Commodore computer owners, reports that its subscribers want hobby-type activities. They like games, talking with one another through a service called People Connection, and exchanging software programs. Gateway also found that its subscribers, another convivial group, liked to chat.

Prodigy's hardware and software profile was forged by a culturally skewed intellectual battle among the troops who produced it. "It was political warfare from day one," says an early witness. Sears, America's big store, had been selling goods through a remote channel, its catalogue, for a century. In one sense Trintex was merely an electronic catalogue. Looking deeper, though, the company could foresee retail patterns changing under pressure from time- and information-short consumers, and it also had other things to hawk: insurance from Allstate, financial services from Dean Witter, and real estate from Coldwell Banker.

> Even if every home has a computer, will the occupants want a shopping and information service? Experience indicates most will not.

From the outset the Sears side took the position that the product should embrace as many consumers as possible, with the goal of making shopping easier. One participant explains: "The customer is king, and he who owns the customer is prince. If I own the customers, I can migrate them to a greater technical ability." The Sears approach suggested low-end computers or even, gasp, *something else*, like the television-phone link called Telaction that J.C. Penney is tinkering with.

And then there was Big Blue. The IBM gang pressed for more serious hardware. Says Chuck Kushell, a former Trintex marketing director who is now with Hill Holliday, an advertising agency in Boston: "It's always been PC, PC, PC. The joke was that it was going to have to be a water-cooled PC they were trying to push so many mips (millions of instructions per second) into it." Papes, however, argues that Trintex has designed a system that could be adapted if necessary to work with a coming generation of "smart" television sets, as well as with computers. Says he: "We are not painted into a corner. We can put our system in any box you want."

By the time Prodigy is up and running, it probably will face plenty of competitors. A firm called U.S. Videotel has bought rights to the Minitel terminal, which the state-owned French telephone system has put into 2.5 million homes since 1981—where most of them are unused and collecting dust. U.S Videotel plans to launch a Minitel-like system this month in Houston.

J.C. Penney's Telaction will be primarily a shopping service. Customers view products by calling Telaction on the phone and turning their televisions to a specified cable chan-

We made you more powerful.

How? With Lotus HAL™—an indispensable collection of 1-2-3® shortcuts that helps you get more out of 1-2-3 than ever before. No matter what your level of expertise. Beginner. Expert. Or anywhere in between.

As the screens to the left demonstrate, Lotus HAL gives you the ability to perform 1-2-3 tasks using simple English phrases—called, logically enough, "requests." So you can focus on *what* you want to do, not *how* to do it. And it does all this without changing 1-2-3 or your worksheet.

In addition to this powerful capability, Lotus HAL also allows you to test assumptions, correct mistakes or simply change your mind with ease. Because through a special capability called "undo," Lotus HAL lets you reverse your last command—even if you retrieve a file before saving your current work.

Besides all this, Lotus HAL allows 1-2-3 to audit spreadsheets for possible errors, and link cells or ranges between worksheets.

One obvious benefit of all this is that you save time. Which means you're more powerful, more productive, more effective than ever before.

Make yourself more powerful, and buy yourself Lotus HAL. You'll find it at your Authorized Lotus Dealer, for just $150.* Or, you can purchase it directly by calling us at 1-800-345-1043 and asking for Product FS-1377. Or ask for FS-1385 to receive more information about Lotus HAL.

You see? Everything with Lotus HAL begins with a simple request.

Lotus HAL

*Suggested Retail Price (Plus Sales Tax)

Requirements: Lotus HAL is a memory-resident program that requires 1-2-3 Release 1A, Release 2, or Release 2.01 (5.25 or 3.5 inch disk version) for personal computers from IBM,* COMPAQ and AT&T, plus 1-2-3 certified compatibles; two disk drives; DOS 2.0 to 3.3; 512K RAM. Please refer to your 1-2-3 package or 1-2-3 documentation for appropriate hardware configurations and DOS requirements or consult your dealer. *Lotus HAL does not operate with Release 1A for the IBM PCjr., or for the IBM 3270PC. When you purchase Lotus HAL directly from Lotus, take your first 30 days to try it. If after 30 days, Lotus HAL does not perform as described and you've purchased it directly from Lotus, we'll gladly give you a full refund. © 1987 Lotus Development Corporation. Lotus and 1-2-3 are registered trademarks of Lotus Development Corporation. Lotus HAL is a trademark of Lotus Development Corporation.

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Lotus 1-2-3
Lotus HAL

nel. By touching the digits on their phones they can stroll through the catalogue as pictures of the items appear on their home screen along with descriptions and prices. Penney has invested about $40 million in the system, which is being test-marketed in Chicago.

Trintex also has to contend with the possibility that the regional Bell operating companies (RBOCs) could enter the business. The RBOCs are enjoined from doing so before 1991 by the federal court decision that broke up AT&T. But a House subcommittee had a hearing in July on whether the RBOCs' inability to get into the information race is causing the U.S. to fall behind other nations in home computerization. Trintex and other information services fear that the RBOCs could gain a significant competitive advantage, since they bring both the bats and balls to the game. Even if the RBOCs don't get into the business themselves, the Federal Communications Commission may allow them to impose added fees on the transmission of data by telephone, on the theory that data transmitters tie up lines for long periods and should pay the full cost of the service they receive.

> Trintex and other information services fear that the phone companies could gain a significant competitive advantage, since they own both the bats and balls.

In the industry, Prodigy's naysayers are vocal. "The longer I was there, the more I was convinced they weren't on to something," says Kushell, the former Trintex marketing man. But Prodigy has some surprising rooters. The on-line companies like QuantumLink and CompuServe, while fearing the prospect of a big competitor, hope Trintex will make consumers more aware of videotext—and more willing to spend money on it. "Trintex is going to advertise like crazy to build the market, and that will help all of us," argues Stephen Case, QuantumLink's vice president of marketing. That's called "legitimizing a marketplace," something for which IBM happens to be famous. Whether it can legitimize this particular offspring remains to be seen.

COMPANIES TO WATCH

The Really Useful Group PLC

TOPHAM

Phantom of the Opera and friend

■ British pop composer Andrew Lloyd Webber and his publicly held theater production company are about to launch another American invasion. The mop-haired creator of *Cats*, *Evita*, and *Jesus Christ Superstar* recently recruited Broadway's most powerful director, Harold Prince, to produce U.S. shows. The Really Useful Group will also raise the curtain on Webber's London hit *The Phantom of the Opera* this January in New York. Webber, owner of 40% of the stock, "would be a whiz kid in finance if he weren't a composer," says his managing director, Brian Brolly. The Really Useful Group gets 40% of the profits after a show covers its costs, which include royalties to Webber and Brolly as producers. British security analysts estimate Really Useful Group's profits for the fiscal year that ended in June at $8.5 million on revenues of $29 million. The common stock, which debuted in London in January 1986 at $4.79 a share, has risen 56%, about average for the London exchange.

Seligman & Latz Inc.

■ In 1982, Harold Geneen, former head of ITT, wanted to do a leveraged buyout of this doddering retailer, which runs jewelry and hairdressing concessions in department stores and owns a line of cosmetics. But he needed a hands-on manager. So he called David Cornstein, who had started his own jewelry and watch repair company. "I was flabbergasted," recalls Cornstein, who had never met Geneen. "He said that if we revived the business and then sold it or took it public, my share would be $275,343,000.18." Three years later, with financial help from Nathaniel de Rothschild of the French banking family, Geneen's group pocketed Seligman & Latz for $42 million in cash and $47 million of debt. In 1986 the company's pretax earnings were $22 million on sales of over $400 million. With investors panting for specialty retailers, Geneen says the group will entertain reasonable bids for the company. He seems well on his way to keeping his promise to Cornstein.

North American Philips Corp.

■ Nine investors are suing this U.S. electronics giant and its Dutch parent NV Philips at a most inconvenient time—when the parent is tendering for the 42% of North American Philips it does not already own. Alan R. Kahn of the New York brokerage firm Kahn Brothers & Co. started suing in June, claiming that Philips consistently impeded its offspring's competitiveness. Kahn seeks divestiture of North American Philips, whose 1986 profits were $68.5 milion on sales of $4.5 billion, and compensation for damages allegedly suffered by its minority shareholders. When the parent offered $50 per share in August, Kahn filed a second suit complaining that Philips was buying off stockholders to kill the lawsuits. Philips says the legal actions lack merit. Arbitragers think Philips will have to pay at least $60 a share. After the bid, North American Philips's stock sold for $54.50.

American Family Corp.

■ Executives who want to learn how to do business in Japan should visit Columbus, Georgia, and ask John Amos. His insurance company, which has a middling business in the U.S., sells 85% of the cancer policies in Japan. American Family earned $100.7 million on sales of $1.4 billion in 1986—mostly from cancer coverage that Japanese corporations sell directly to employees and retirees. Amos's nephew and heir apparent, Dan, is so optimistic he added 100,000 shares to his holdings in July. The stock, which recently traded at $17.50 a share on the New York exchange, is likely to be listed in Tokyo by December. **—Brett Duval Fromson**

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FORTUNE

OCTOBER 12, 1987

THE BILLIONAIRES

An Inside Look at the More Than 100 People Who Are Worth More Than $1,000,000,000

This 61-Year-Old Grandmother, With $7.4 Billion, Is Fifth on the List

OCTOBER 12, 1987

FORTUNE

Asked how big he wanted a new airport, he replied, "How big do they come?"

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She says she adores "ruby strawberries floating in champagne bubbles."

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"It's stupid," he says of the sudden run-up in his net worth.

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"I'm just an old farmer who's been a little lucky."

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shita, King Fahd of Saudi Arabia, Alfred Heineken, Anne Cox Chambers, Edgar

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He fears rich heirs will lack "the lash of ambition on their back" and become "well-fed house dogs."

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"It was like riding a tiger. You can't get off. You must go forward or get eaten."

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"I don't like to stand still. I don't care if the forecast is bad. I want to leave port."

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"You won't find it. Only Ferdinand and I know where the hidden wealth is deposited."

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THE EDITOR'S DESK

NINA BARNETT (2)

FORTUNE *hunters: (front) editor Ehrbar flanked by Elizabeth Krist and Lorraine Carson; (rear) Jean Held, Eric Godwin, Karen Zakrison*

WHY SHOULD FORTUNE publish the most comprehensive examination of the world's billionaires? Mountaineer George Leigh Mallory, of Mount Everest fame, might have said "because they are there." In fact, many more of them are there than anyone might expect—well over 100, vs. only one (oilman J. Paul Getty) 30 years ago. And F. Scott Fitzgerald might have said, "because the very, *very* rich are *not* so different from you and me." Though the billionaires run from royalty to rogues, many of them worry about spoiling the kids, simultaneously splurge and pinch pennies in the most oddly human ways, indulge everyday vanities and embrace grand ideals, and wonder and worry about keeping their good times rolling into the future. Horatio Alger would have been happy to learn that many made their megawealth on their own spunk and creativity. Says senior editor Aloysius Ehrbar, who supervised our 51-page special report: "By and large the billionaires are success stories, not inheritance stories."

The project started 11 months ago. Evelyn Benjamin, deputy chief of reporters, observed that of the 12 lists that FORTUNE produces, including the famous 500s, the one that draws the most press attention is the 50 largest industrial companies in the world. Reasoned Benjamin: "People must be interested in what other people the world over are worth." She assigned senior reporter Lorraine Carson to start researching a possible 13th list, one that would rank the world's richest people. Carson, who combines the talents of Sherlock Holmes and an investment banker, sorted through annual reports, government documents, press clippings, and books. She queried consultants, businessmen, and our correspondents around the world. Sifting the data and making judgment calls required many post-midnight workdays for head billionaire hunter Carson and a dozen other reporters.

Financial disclosure requirements differ among countries, secrecy laws can be tough, much wealth is locked in private companies—and the billionaires rarely advertise what they have. Yet many were quite cooperative. Walter Annenberg, the press-shy press lord, talked candidly in his Colorado vacation house with writer Brian Dumaine. Earthy Saudi entrepreneur Suliman Olayan recalled to writer Anthony Ramirez his humble days as a warehouseman. When billionaires refused to be interviewed, we had ways of finding out about them. The Sultan of Brunei, for one, declined to cooperate, but our Asian editor, Louis Kraar, had interviewed him several times before. Drawing on the Sultan's associates, international businessmen, and his own notebooks, Kraar pieced together a fascinating portrait of the potentate, including the fact that he keeps two guest thrones for visiting royalty. Louis Richman flew to Europe and to California to profile the Dutch, the Germans, and the U.S. real estate billionaires. Jeremy Main, who was raised in Argentina, consulted on the Latin American section and wrote the article on Canada's richest. Jaclyn Fierman, who studied in Italy, wrote the profiles on the Italians and the U.S. entrepreneurs as well as the introduction to the whole package. Meanwhile, designer Jean Held produced the listings and other graphics.

KRISTINE LARSEN

Ramirez (left) interviews Suliman Olayan.

Some billionaires regard photographers with as much affection as they do tax collectors. To surmount this camera shyness, picture editor Michele McNally and her associates Elizabeth Krist, Eric Godwin, and Karen Zakrison spent a month canvassing more than 200 photo agencies, 50 newspapers, and 100 freelance photographers around the world. The yield: several thousand pictures, of which we run 120. They give you yet another view of many people who, as editor Ehrbar says, "are making *new* wealth through energy and ingenuity."

Examining the very wealthy: Louis Richman, Jaclyn Fierman, Brian Dumaine, Jeremy Main

Marshall Loeb

MANAGING EDITOR

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BILLIONAIRES

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
SULTAN HASSANAL BOLKIAH 41 Page 132	Bandar Seri Begawan BRUNEI	**$25.0**	**Oil; gas; $20 billion in foreign investments.** The absolute ruler of a Delaware-size country on the island of Borneo, the Sultan exploits his nation's rich hydrocarbons in joint ventures with Royal Dutch/Shell and Mitsubishi. Two wives, three sons, six daughters, and a 1,788-room palace.
KING FAHD 67 Page 167	Riyadh SAUDI ARABIA	**$20.0**	**Saudi Arabia's oil-rich national treasury.** Fahd was a legendary jet-setting playboy in his youth. Sleeps in the afternoon and works at night. Evidences a mastery of economics. Two wives, 11 children.
SAM MOORE WALTON 69 Page 142	Bentonville ARKANSAS	**$8.7**	**39% of Wal-Mart Stores (annual sales: $8.7 billion).** Started in business in 1945 in Newport, Arkansas, and as chairman and CEO keeps close watch on his 1,072 discount stores through a superb communications network and frequent visits. A pilot and avid hunter (quail, pheasant), Walton lives with his wife, Helen, in a modest ranch-style house. Four children.
SAMUEL I. NEWHOUSE JR. 59 **DONALD E. NEWHOUSE** 58 Plus mother, Mitzi, and six children—Page 156	New York NEW YORK	**$7.5**	**100% of Advance Publications and Newhouse Broadcasting.** Sons of founder Sam, the Newhouse brothers own 26 daily newspapers, the ninth-largest cable TV operator in the U.S., and the Condé Nast and Random House magazine and book empire. Hard-working managers, firm believers in nepotism. Three of their children are in the business.
QUEEN ELIZABETH II 61 Page 134	London ENGLAND	**$7.4**	**Real estate, including Balmoral Castle in Scotland (50,000 acres), Sandringham House in Norfolk (20,000 acres); major U.S. properties; racehorses; most valuable stamp collection in world; vast shareholdings.** Gets over $30 million a year from investments abroad—all tax-free—but turns off palace lights to save money. Three sons, one daughter.
KENNETH COLIN IRVING 88 Plus three sons—Page 183	St. John NEW BRUNSWICK	**$6.0**	**300 companies: oil, shipbuilding, forestry, pulp and paper, newspapers.** K. C. Irving, a second-generation Canadian, started with his father's sawmill and a single gas station. A Bermuda resident to avoid taxes, he still runs the enterprise with his three workaholic sons.
LESTER CROWN 62 Page 160	Chicago ILLINOIS	**$5.7**	**23% of General Dynamics, worth $600 million; real estate and sports teams.** Lester's father, Henry, 91, transformed a sand and gravel business into a controlling interest in General Dynamics. With two sons, Crown manages a portfolio that includes a stake in the New York Yankees.
KENNETH R. THOMSON 64 Page 183	Toronto ONTARIO	**$5.5**	**73% of International Thomson Organisation; Thomson Newspapers; Hudson's Bay (more than 400 department stores, including Hudson's Bay, Simpsons, Fields); real estate.** The second Lord Thomson of Fleet, a Cambridge grad, started as a disk jockey and reporter. Three children.
FORREST E. MARS SR. 83 **FORREST E. MARS JR.** 56 **JOHN F. MARS** 52 Page 152	Las Vegas NEVADA McLean VIRGINIA	**$5.0**	**100% of Mars Inc.** Forrest Mars Sr. quarreled with his father, the founder of Mars Inc. (Milky Way, Snickers), and went to England with $50,000 in 1932. There he built a new candy and pet food company several times larger than his father's. Back in the U.S., he developed precooked rice (Uncle Ben's) and M&Ms. Took over his late father's faltering company in 1964 and restored its vigor, merging his own company with it and insisting on high quality. Able sons Forrest Jr. and John now run Mars Inc.
ALBERT REICHMANN 58 **PAUL REICHMANN** 56 **RALPH REICHMANN** 53 Page 183	Toronto ONTARIO	**$5.0**	**92% of Olympia & York, largest owner of New York City commercial real estate (including $1.5-billion Battery Park City); 37% of Trizec (also real estate); 93% of Abitibi-Price; 80% of Gulf Canada.** Vienna-born sons of a Hungarian egg distributor who fled the Nazis and went to Tangier, later to Canada. Strict Orthodox Jews who found Talmudic studies better than a Harvard MBA. Fourteen children among them.
SHEIKH JABER AL SABAH 61 Page 167	KUWAIT	**$5.0**	**Ruler of an oil-rich land with per capita income of $23,000 a year; vast foreign investments.** Al Sabah's family has ruled Kuwait since 1751, and the oil boom multiplied his wealth. Twenty sons.
QUEEN BEATRIX 49 Page 134	The Hague NETHERLANDS	**$4.4**	**Real estate, including five palaces; jewels; a queen-size portfolio of stocks, including 5% of Royal Dutch/Shell.** Leads quiet life with German-born Prince Claus von Amsberg and their four sons.

☐ UNITED STATES ☐ CANADA AND LATIN AMERICA ☐ EUROPE ☐ MIDDLE EAST AND AFRICA ☐ ASIA

BILLIONAIRES

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
SID RICHARDSON BASS 44 **EDWARD PERRY BASS** 42 **ROBERT MUSE BASS** 39 **LEE MARSHALL BASS** 31 Page 153	Fort Worth TEXAS	$4.0	**Oil; real estate; investments in Walt Disney Productions, American Medical International, and more.** Father Perry Bass was the lawyer for his uncle, the legendary wildcatter Sid Richardson, who bequeathed $3 million to each of the four Bass brothers. The brothers, all Yale grads, took the grubstake and exploded it. Sid Bass's recent breakup with wife Anne (two children) and liaison with socialite Mercedes Kellogg keep his name in gossip columns, making it difficult for him to realize his oft-quoted wish: "I just want to disappear." Edward, single, has a hotel in Katmandu and a 300,000-acre ranch in Australia. Robert, married with two children, is also a big real estate investor. Lee, married and childless, works closely with Sid.
GERALD GROSVENOR 35 Page 182	London ENGLAND	$4.0	**300 acres in London's upper-class Belgravia and Mayfair districts; an 11,000-acre estate near Chester; 100,000 acres of English forest land; a 12,000-acre industrial park in British Columbia; Grosvenor International Holdings (hotels, shops, and office buildings in Hawaii, office buildings in San Francisco, shopping centers in Chicago).** Life is swell when you're the sixth Duke of Westminster. Family wealth stems from 1677, when Sir Thomas Grosvenor's 12-year-old bride brought a cabbage patch as a dowry. London grew up around the cabbages. Patron of 150 charities, the Duke drives an Aston Martin Lagonda while chain-smoking and brushing a mop of hair from his eyes. He and wife Natalia have two daughters.
EDGAR M. BRONFMAN SR. 58 **CHARLES R. BRONFMAN** 56 Page 152	New York NEW YORK Montreal QUEBEC	$3.6	**33% of Seagram Co.** Edgar Bronfman is chairman and CEO of Seagram, the Montreal firm his father bought in the Roaring Twenties. The world's largest distiller, Seagram's main operating subsidiary is Joseph E. Seagram & Sons in New York, housed in the renowned Seagram Building. Brother Charles Bronfman had been deputy chairman of the company and became co-chairman in 1986, after a public spat with Edgar Sr. over the anointing of Edgar Jr. as future head of the business.
GODFRIED BRENNINKMEYER Page 180	Amsterdam NETHERLANDS	$3.4	**Major shareholder in C&A, family chain of clothing shops (more than 500 in Europe, Hong Kong, Japan, and U.S.).** C&A started in the last century by two peddlers, Clemens and August Brenninkmeyer. The family's slogan: "Openness is a sign of weakness." Even ages are closely held.
JOHN WERNER KLUGE 73 Page 156	Charlottesville VIRGINIA	$3.1	**Billions in cash; real estate.** German-born, Detroit-reared, Kluge started out as a food broker and then went into broadcasting. He built Metromedia into the largest group of independent TV stations in the U.S., selling it to Rupert Murdoch's News Corp. in 1985 for nearly $2 billion. Kluge and second wife Patricia, a former model who posed nude, now breed cattle and horses on a 6,000-acre Virginia estate. Three children.
HENRY LEA HILLMAN 68 Page 160	Pittsburgh PENNSYLVANIA	$3.0	**Owns Hillman Co.: real estate, and venture capital bets in Silicon Valley.** In Pittsburgh the old saying was, "Anything the Mellons don't own, the Hillmans do." Hillman's skillful management of the wealth he inherited from his father in 1969 ($300 million) has made him richer than any Mellon heir. He and wife Elsie have two sons, two daughters.
CHARLES KOCH 51 **DAVID KOCH** 47 Page 153	Wichita KANSAS New York NEW YORK	$3.0	**Koch Industries: oil, gas, coal, cattle ranches, other real estate, chemicals, agricultural and fiberglass products.** After a bitter three-year fight for control of the family company with David's twin, William, and older brother Frederick, Charles and David won in 1983 and now preside over the quiet giant. Charles lives with wife Elizabeth and two children in a contemporary house in Wichita. David, a bachelor, lives in Manhattan, sits on the boards of a dozen charitable and educational organizations.
DAVID PACKARD 75 Page 148	Los Altos Hills CALIFORNIA	$3.0	**17% of Hewlett-Packard; real estate; other investments.** Coloradan Packard started in business in 1939 with Stanford classmate William Hewlett (see below), with $538, making measuring and control devices. A former college football player, he added business savvy to Hewlett's engineering talent. He is a recent widower; three daughters, one son.
WHITNEY MACMILLAN 58 **CARGILL MACMILLAN JR.** 60 Page 160	Minnetonka MINNESOTA	$2.9	**60% of Cargill (estimated annual sales: $32 billion).** Grandsons of the founder of the grain and meatpacking colossus, the brothers employ 52,000 workers. Whitney is CEO, Cargill a vice president. A family foundation passes out $2 million annually. Whitney has two children, Cargill four.

BILLIONAIRES

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
FRIEDRICH KARL FLICK 60 Page 176	Munich WEST GERMANY	**$2.8**	**Lots of cash from selling 10% of Daimler-Benz, 97% of Duderus Steel, 28% of W.R. Grace, and other companies; major shareholder in German insurance companies.** Flick was born into a wealthy steelmaking family. His father flourished under Hitler, was convicted of using slave labor in his mills, and served three years in Allied prisons after the war. His eldest brother was killed in World War II and the second eldest was disinherited. Known mainly for barroom brawling and inexpert drum playing in dance bands prior to father's death, Flick surprised everybody by taking charge and showing business acumen. Twice divorced, two daughters.
JOHANNA QUANDT 65 Page 176	Kiel WEST GERMANY	**$2.8**	**70% of Bayerische Motoren Werke (BMW); stocks in some 100 other companies.** The second wife of the late Herbert Quandt, who increased a family fortune by acquiring failing companies and skillfully nursing them to health. Tight-lipped trustees run the extensive investment portfolio for Quandt, her two children, and three stepchildren.
JOHANNES THURN UND TAXIS 61 Page 176	Regensburg WEST GERMANY	**$2.8**	**Thurn und Taxis Bank, one of West Germany's biggest private banks; real estate in West Germany, Brazil, and Canada; 100% of Produco, a supplier of rare metals to industry; a family brewery.** Son of a German duke and a Portuguese princess, Prince Johannes grew up in a 500-room Bavarian castle. Maltreated at home, beaten by Nazi classmates in high school, he became a notorious playboy given to crude pranks like singeing ladies' gowns with cigars. In 1970 he changed lifestyle, hired consultant Booz Allen for advice, divested six castles and other nonproductive assets, and started new businesses in Germany and Brazil. Married a countess ("Princess T 'n' T") 30 years his junior in 1980. Two daughters, one son.
ANNE COX CHAMBERS 67 **BARBARA COX ANTHONY** 64 Page 156	Atlanta GEORGIA Honolulu HAWAII	**$2.5**	**97% of Cox Enterprises, which owns 20 daily newspapers, eight TV stations.** Daughters of three-term Ohio governor James M. Cox, a poor farm boy who went on to become the Democratic presidential nominee in 1920. Chambers, former ambassador to Belgium under President Carter, is a leading Atlanta hostess. Anthony runs the family cattle ranches; her son James Cox Kennedy, 39, is slated to run Cox Enterprises.
LI KA-SHING 59 Page 162	HONG KONG	**$2.5**	**40% of Cheung Kong, which controls Hutchison Whampoa, a Hong Kong trading conglomerate; controlling interest in Husky Oil of Canada and Hongkong Electric; real estate in Hong Kong and Canada.** Started out making plastic flowers in the 1950s. Entered the Hong Kong real estate market and became the first Chinese businessman to take over a British "hong," or trading conglomerate. Lives simply, has two sons.
H. ROSS PEROT 57 Page 148	Dallas TEXAS	**$2.5**	**Cash and securities; gas; oil; real estate.** Son of a horse trader, Perot is an iconoclastic computer magnate, a populist, and an ardent patriot. Has been described as a "pint-size billionaire with a Texas-size mouth." Quit IBM in 1962 to start Electronic Data Systems. Sold it to GM in 1984 for $2.5 billion. Has given away more than $100 million ("about all you can do with it") to a variety of causes. He and his wife Margot have five children.
A. ALFRED TAUBMAN 62 Page 138	Bloomfield Hills MICHIGAN	**$2.5**	**Real estate (20 regional malls, major stakes in Detroit's Riverfront apartments and an office tower on Manhattan's Fifth Avenue); 100% of Woodward & Lothrop and John Wanamaker department store chains; owns A&W restaurant company; 60% of Sotheby's auction house.** Taubman dropped his first name, Adolf, after relatives died in the Holocaust. Began as a builder of K mart and other stores, then modest gas stations. Eventually pioneered the development of mammoth shopping malls fitted out with elaborate fountains and sculpture; each mall boasts up to five department stores. Two of his three children work with him.
YOSHIAKI TSUTSUMI 53 Page 166	Tokyo JAPAN	**$2.5**	**40% of Kokudo Keikaku, which among other things owns 48% of Seibu Railway.** Tsutsumi inherited the business from his father. He and his wife, Yuri, have two sons and a daughter.
FREDERIK H. FENTENER VAN VLISSINGEN 54 Page 180	Hilversum NETHERLANDS	**$2.5**	**Major shareholdings in Steenkolen Handels Vereniging, worldwide distributor of consumer goods; Noro Group, which manages investments for rich individuals and institutions; Akzo NV, chemicals.** The van Vlissingen wealth is based on the founding in 1896 of Vereniging, originally a coal cartel. Frederik controls the fortune.

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
HENDRIK JAN VAN BEUNINGEN 67 Page 180	Cothen NETHERLANDS	**$2.4**	**Major interests in Robeco, one of the world's largest investment funds; Pakhoed (oil tankers); Smit International (tugboats).** Like the van Vlissingen fortune, the van Beuningen money comes from a former coal cartel. A widower, van Beuningen shares the wealth with a brother and sister. None of the three are active in management.
ANTON CASPAR DREESMANN 64 Page 180	Laren NETHERLANDS	**$2.4**	**Major shareholder, Vendex International, family-owned holding company for chains of Vroom & Dreesmann and other European department and clothing stores, a mail-order business.** An active manager (president of Vendex), he prefers the company of intellectuals. Honorary professor of economics at Amsterdam's municipal university.
SIR JOHN MOORES 91 Page 182	Formby ENGLAND	**$2.4**	**Owns Littlewoods, the largest private company in Britain, operator of Littlewoods Football Pools, 111 retail stores, six mail-order companies.** In 1923 Moores and two mates organized the football pools, in which, for a few pennies, contestants guess the outcome of football matches across Britain. Sir John soon bought out his partners, and 7.5 million people now play the pools each week during the football season. Retiring in 1982, he traded his Rolls for a Ford, saying, "I no longer need such a grand car."
LESLIE WEXNER 50 Page 142	Columbus OHIO	**$2.4**	**28% of the Limited (2,857 retail clothing stores for women, in several chains); real estate in New York City, Palm Beach, and Aspen, Colorado.** A bachelor, Wexner has many residences, including a mansion in a Columbus suburb, where he and his two dogs live near his mother, Bella.
AUGUST VON FINCK 57 **WILHELM VON FINCK** 59 Page 176	Munich WEST GERMANY Düsseldorf WEST GERMANY	**$2.2**	**Munich real estate; 9% of Munchner Rückversicherung, the world's largest reinsurance company; 6% of Allianz Insurance Corp., Germany's biggest; interests in banking, construction, and more.** Sons of an ardent Nazi who took over Rothschild Bank in Vienna, the von Fincks prospered buying Munich real estate after the war.
KEITH RUPERT MURDOCH 56 Page 156	New York NEW YORK	**$2.2**	**47% of News Corp., international media conglomerate that owns 17 daily newspapers, eight TV stations, Twentieth Century Fox Film, the Fox TV network.** Australian-reared Murdoch was once dismissed as an unimportant purveyor of racy tabloids. Now he is a U.S. citizen and an undismissable visionary engaged in a high-risk attempt to build a worldwide media empire. Married to Anna, a novelist; four children.
WARREN EDWARD BUFFETT 57 Page 144	Omaha NEBRASKA	**$2.0**	**45% of Berkshire Hathaway, the vehicle for large investments in Capital Cities/ABC, Geico, Washington Post, and others.** Since 1965 Buffett has boosted Berkshire Hathaway's book value per share from $19.46 to $3,900. Father of three, he plans to give most of his money to charities.
WILLIAM R. HEWLETT 74 Page 148	Portola Valley CALIFORNIA	**$2.0**	**12% of Hewlett-Packard; real estate, investments.** Graduate of Stanford and MIT, Hewlett is known as a quiet scientist and an engineer's engineer. Of H-P's thousands of products, his favorite is the hand-held scientific calculator, a first, which made the slide rule obsolete. Gave $50 million to Stanford in 1986. Being rich is not easy, he says. Two daughters, three sons.
LIEM SIOE LIONG 70 Page 162	Jakarta INDONESIA	**$2.0**	**24% of Bank Central Asia, Indonesia's largest private bank; controls First Pacific Group (owns Hibernia Bank in California); construction; insurance.** A Chinese emigrant, Liem supplied Indonesian forces with food and medicine during the struggle for independence from the Dutch. Has received lucrative government franchises ever since. Four children.
SHEIKH RASHID AL MAKTOUM 77 Page 167	DUBAI	**$2.0**	**Ruler of an oil-rich land; extensive foreign investments.** A business-minded ruler, known as the Fox, Maktoum closely supervised oil's transformation of his sheikhdom. Seldom seen since a stroke a few years ago. A widower, he has five daughters, four sons.
SULIMAN SALEH OLAYAN 68 Page 169	Riyadh SAUDI ARABIA	**$2.0**	**Controls Olayan Group, which manages a portfolio including 7% of First Chicago Corp., 5.3% of Transamerica, 5% of Occidental Petroleum, and 1% of Chase Manhattan, and some 25 companies in real estate, food importing, transportation, insurance, and construction.** Orphaned at 4, Olayan got his start in 1937 as a dispatcher for Aramco and then became a subcontractor on the Trans-Arabian pipeline. Married to an American, he has four children, three of whom help run the business.

BILLIONAIRES

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
SULIMAN RAJHI 65 Plus three brothers—Page 169	Jiddah SAUDI ARABIA	**$2.0**	**42% of Al Rajhi Co. for Currency Exchange & Commerce, the largest money exchange firm in Saudi Arabia; 15% of a new Islamic bank that is to be capitalized at $200 million.** The family's net worth has decreased as real estate values in the Middle East have fallen with oil prices.
RAUL GARDINI 54 Plus family members—Page 172	Ravenna ITALY	**$1.9**	**Ferruzzi Group, Italy's No. 3 company, a producer of sugar, chemicals, and food; 39% of Montedison, a chemicals giant.** Gardini calls himself "a peasant in a suit." Son of a farmer, he married the boss's daughter and vastly increased the family's riches through aggressive management. A tireless worker, avid duck hunter, and yachtsman. Father of three.
MADELEINE DASSAULT 85 **SERGE DASSAULT** 62 **CLAUDE DASSAULT** Page 174	Paris FRANCE	**$1.8**	**49.7% of Avions Marcel Dassault-Breguet Aviation SA; other Dassault enterprises, including real estate, construction, film studios, publishing, finance, forestry, electrical engineering, and a Saint Emilion vineyard.** Madeleine is the widow of aviation tycoon Marcel Dassault. Born Bloch, Dassault spent eight months in the Buchenwald concentration camp; converted to Roman Catholicism in the 1950s. He died last year at 94, ruling his French empire to the end of his life. Son Serge now runs the family business. With brother Claude, he owns about half the family wealth.
LAURENCE ALAN TISCH 64 **PRESTON ROBERT TISCH** 61 Page 144	New York NEW YORK Washington D.C.	**$1.8**	**24% of Loews Corp.; through Loews, 25% of CBS, 100% of Loews Hotels, 80% of CNA Financial, 95% of Bulova; plus other investments.** The Tisch brothers began with modest, family-backed stakes in real estate. Larry is the grand strategist, a bridge player, student of the Talmud, father of four sons. Brother Bob, formerly the operating half of the Tisch team, became U.S. Postmaster General in 1986, has three children.
REINHARD MOHN 66 Page 176	Gutersloh WEST GERMANY	**$1.7**	**90% of Bertelsmann AG, among the world's largest media companies; U.S. properties include book publishers Bantam and Doubleday.** Mohn's maternal grandfather founded a publishing house that the Nazis closed in 1940. A U.S. prisoner of war, Mohn took over the family's remaining assets in 1947 and ran the company until 1981. Three daughters.
MARGARET HUNT HILL 72 **HAROLD "HASSIE" HUNT III** 70 Page 153	Dallas TEXAS	**$1.6**	**Large interests in Hunt Petroleum Corp., real estate (including Seven Falls resort in Colorado Springs), and investments, mostly conservative.** Margaret, the eldest child of H. L. Hunt, handles investments for brother Hassie, who years ago suffered what the family describes as a nervous breakdown. Married to oilman Al Hill, three children.
ESTEE LAUDER 79 Plus family—Page 144	New York NEW YORK	**$1.6**	**100% of Estée Lauder Inc. (estimated annual sales: $1.3 billion).** New York–born daughter of Hungarian-Czech immigrants, Lauder started by selling four face creams developed from an uncle's home recipe. Son Leonard, 54, is president and CEO; son Ronald, 43, is being succeeded as U.S. Ambassador to Austria by Henry Grunwald, former Time Inc. editor-in-chief.
SILVIO BERLUSCONI 50 Page 172	Milan ITALY	**$1.5**	**Italian and French cable TV systems; real estate.** Berlusconi paid his way through college singing in cabarets; made his first million in real estate, his billion by giving Italian TV viewers an exciting, tacky, U.S.-style alternative to the government-run station. Shares his 30-room palace near Milan with a world-renowned collection of Renaissance paintings; Miriam Bartolini, 32, a former actress; and their two daughters. Has two other children.
LILIANE BETTENCOURT 64 Page 174	Paris FRANCE	**$1.5**	**26% of L'Oréal, maker of hair colorings, Lancôme cosmetics, Anais Anais perfume; at least 3% of Nestlé (worth $513 million).** Liliane's father founded the beauty products company and invented the first chemical hair dye in 1907. Married to André Bettencourt, former Gaullist minister. Mme. Bettencourt's only child, Françoise, will inherit the L'Oréal and Swiss food company shares and a fine art collection.
JOHN T. DORRANCE JR. 68 Page 160	Philadelphia PENNSYLVANIA	**$1.5**	**32% of Campbell Soup Co., worth $1.3 billion and yielding $26.4 million a year in dividends; plus other investments.** Dorrance's father, the inventor of condensed soups, died in 1930, leaving a $128-million estate. Jack Dorrance joined Campbell after World War II and spent 38 years with the company. An outdoorsman (hunting and fishing) despite a triple-bypass operation five years ago. Two sons and a daughter. Lives with second wife and four stepchildren on a 40-acre estate.

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
WILLIAM R. HEARST JR. 79 **RANDOLPH A. HEARST** 71 Page 156	New York NEW YORK San Francisco CALIFORNIA	**$1.5**	**40% of Hearst Corp. (13 magazines, 15 newspapers, broadcasting, books).** William, older of the two surviving sons of press lord William Randolph Hearst, won a Pulitzer Prize for interviews with Soviet leaders. Now bears the title of editor-in-chief, writes a Sunday column. An avid horseman and head of the family trust. Randolph is chairman and the father of Patty, who was kidnapped by the so-called Symbionese Liberation Army.
MASATOSHI ITO 63 Plus wife, three children—Page 166	Tokyo JAPAN	**$1.5**	**Ito-Yokado Co., Japan's most profitable supermarket chain, Seven-Eleven Japan (3,100 stores), and Denny's Japan.** Ito started as owner of a small Tokyo clothing store he and his family ran after the war. A rigid disciplinarian, Ito sets rules for hair styles and even the height of heels his women employees are allowed to wear on the way to the job.
KONOSUKE MATSUSHITA 92 Page 166	Osaka JAPAN	**$1.5**	**Major share of the Matsushita Group of companies (1986 sales: $32 billion), world's largest maker of consumer electronic products.** Known in Japan as "the god of management," Matsushita started Matsushita Electric in 1918, making lamp sockets. His brands: Panasonic, Technics, Quasar, and National. Lives with his 91-year-old wife. They adopted son-in-law Masaharu Matsushita, who now runs the company.
SHEIKH ZAID AL NAHAYAN 71 Page 167	ABU DHABI	**$1.5**	**Oil; investments include U.S. Treasury bond futures and a 1,200-acre Champagne vineyard.** Nahayan seized power from his brother in 1966 to become Abu Dhabi's ruler. Also president of the United Arab Emirates. A Bedouin who grew up in poverty, he spent $40 million on the wedding of his eldest son, Mohammed. Has 19 sons, 22 daughters.
OSMAN AHMED OSMAN 69 Page 169	Cairo EGYPT	**$1.5**	**Arab Contractors Corp., builders of the Aswan High Dam; Middle East Land Reclamation Co.; Eicon (Engineering & Industrial Construction Co.); and Arab Contractors for Investment; founder of Suez Canal Bank and the National Development Bank of Egypt.** A close friend of and minister of construction for Anwar Sadat, Osman benefited from Sadat's Infitah (open door) policy, the 1974 return to Western-style capitalism. Son Mahmoud is married to Sadat's youngest daughter, Jihan.
JAY ARTHUR PRITZKER 65 **ROBERT ALAN PRITZKER** 61 Page 138	Chicago ILLINOIS	**$1.5**	**Major ownership of the Hyatt hotel chain; 100% of Marmon Group, a $2.9-billion-a-year conglomerate that makes mining machines and ladies' gloves; Braniff airlines; investments in chewing tobacco and casinos.** These descendants of a penniless Russian immigrant are still expanding their father's real estate empire. Robert, an engineer, runs Marmon Group, while attorney Jay oversees the rest and has been very active in Chicago civic affairs. Sibling relations are harmonious: The brothers were spotted recently sharing a single corned beef sandwich. Nine children.
DAVID ROCKEFELLER 72 **LAURANCE S. ROCKEFELLER** 77 Page 160	New York NEW YORK	**$1.5**	**Joint investments include $1.1 billion in a family trust, $350 million in stocks and bonds, real estate, and venture deals.** The riches derive from grandfather John D., who created the Standard Oil trust. David was chief executive of Chase Manhattan until 1981. He has six children, including David Jr., considered the likeliest leader among the 22 fourth-generation "cousins." Brother Laurance, who launched Rockresorts, has four children.
Y. C. WANG 70 Page 162	Taipei TAIWAN	**$1.5**	**Formosa Plastics Group (15 plants in the U.S.); real estate, including a mansion in Short Hills, New Jersey.** A former rice merchant whose formal education ended with elementary school, he founded a plastics manufacturing empire that has become the world's largest producer of polyvinyl chloride resin, a basic material for plastic. Says he has no hobbies because "I can't afford to relax." Two sons, seven daughters.
SHOJI UEHARA 59 Plus mother and son—Page 166	Tokyo JAPAN	**$1.4**	**33% of Taisho Pharmaceutical Co.; real estate.** Shoji Uehara's father managed Taisho, which the son has built into Japan's leading over-the-counter drug maker (1986 sales: $814 million). Leads a spartan life. His daily lunch menu: tea, consommé, and biscuits.
KING HASSAN II 58 Page 167	Rabat MOROCCO	**$1.3**	**Real estate (an estimated 80% of his wealth), including eight palaces in Morocco and properties in New York, New Jersey, and Paris.** The 39th descendant of Mohammed has been the ruler of Morocco since the death of his father, King Mohammed V, in 1961. Inherited the family fortune. He and his wife, Lala Latifa, have five children.

BILLIONAIRES

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
AUGUST ANHEUSER BUSCH JR. 88 Page 152	St. Louis MISSOURI	**$1.3**	**13.2% of Anheuser-Busch Cos. (1986 sales: $7.7 billion), which includes brewery, Campbell Taggart bakery, aluminum can manufacturer.** The third generation of Busches to run the nation's largest brewery, "Gussie" became a Democrat out of gratitude to Franklin D. Roosevelt for the repeal of Prohibition. Married four times. August III, the eldest of Gussie's 11 children, now heads a prospering Anheuser-Busch.
HENRY FORD II 70 **WILLIAM CLAY FORD** 62 **JOSEPHINE FORD** 64 Page 160	Detroit MICHIGAN	**$1.3**	**40% of Ford Motor (1986 sales: $62.7 billion).** Eldest grandson of founder Henry Ford, Henry II began the reconstruction of both Ford and downtown Detroit in 1943, ruled until 1[illegible]. Twice divorced and remarried, he has three children by his first wife. Wi[illegible] chairman of Ford Motor, is owner of the Detroit Lions football tea[illegible]d wife Martha Firestone have four children, including William Clay II, [illegible] who works for Ford in Europe. Josephine ("Dodie") is active in charities [illegible]he arts. Married to Walter B. Ford, of an unrelated Detroit banking family, [illegible] have four children.
ALFRED HENRY HEINEKEN 63 Page 180	Noordwijk NETHERLANDS	**$1.3**	**50% of Heineken brewery.** Grandson of the founder, Freddy Heineken discovered the importance of advertising on a trip to the U.S. at 23. As chairman he still rules on all ad decisions. Entertains the likes of Queen Beatrix on his 90-foot yacht and at estates in the Netherlands, Switzerland, and France. He is married, has one daughter.
HARRY B. HELMSLEY 78 Page 138	New York NEW YORK	**$1.3**	**Real estate, including hotels and a stake in the Empire State Building.** Helmsley began at 16 as an office boy in a Manhattan real estate firm, earning $12 a week; now he owns the place. A master of real estate syndication, he assembled a fiefdom of hotels, office buildings, apartment houses, and industrial structures through syndication. In 1972, at 63, he married the controversial Leona; his second marriage. She is now president of the Helmsley hotel chain. They live in a duplex penthouse with swimming pool atop New York's Park Lane Hotel. No children.
EWING M. KAUFFMAN 71 Page 144	Kansas City MISSOURI	**$1.3**	**23% of Marion Laboratories (annual sales: $600 million); co-owner of Kansas City Royals baseball team; real estate and other investments.** A Missouri farm boy, Kauffman came out of the Navy after World War II and went into business selling an oyster-shell-based calcium supplement. Soon branched into other products, such as angina and ulcer drugs. His wife, Muriel, the company vice president, buys his clothes and "taught me how to live with money." Three daughters.
JOHN THOMAS LUPTON 61 Plus other family members—Page 152	Chattanooga TENNESSEE	**$1.3**	**Wealth derives from Coca-Cola bottling.** Lupton's grandfather and namesake was one of the three original Coca-Cola bottlers. Having made money in patent medicines, he invested a small sum in the new business and began bottling Coca-Cola in 1899. The latter-day John was CEO of the family's JTL Corp., largest independent Coke bottler, when Coca-Cola acquired it in 1986 for $1.2 billion in cash. One son, three daughters.
JOHN WILLARD MARRIOTT JR. 55 **RICHARD EDWIN MARRIOTT** 48 **ALICE SHEETS MARRIOTT** 79 Page 138	Bethesda MARYLAND	**$1.3**	**20% of Marriott Corp. (240 hotels, 680 restaurants, plus contract food services).** Descended from Mormon pioneers, the Marriott brothers built up the business mother Alice and their father started with a nine-stool A&W root beer stand in Washington, D.C. Chief executive since 1972, Bill Jr. expanded the hotel business, which produced 40% of the company's $5.3-billion sales last year. Dick is vice chairman. Assets include stock held in several trusts for the brothers' children.
LUCIANO BENETTON 52 **GILBERTO BENETTON** 46 **GIULIANA BENETTON** 50 **CARLO BENETTON** 43 Page 172	Treviso ITALY	**$1.2**	**Owners of Benetton, designers and manufacturers of casual clothes, sold worldwide in franchised stores.** What began with sister Giuliana's homemade sweaters has become a giant with a unique franchising system and a sophisticated high-tech design and distribution system, the world's leading consumer of wool. She has remained the creative Benetton. Luciano is the management genius, while Gilberto looks after the financial side and Carlo oversees production. Ten children among them.
DONALD BREN 55 Page 138	Newport Beach CALIFORNIA	**$1.2**	**92% of Irvine Ranch, with 65,200 largely undeveloped acres in Orange County, California.** Bren made his mark as developer of Mission Viejo, a planned community south of Los Angeles. Part of the investor group that took over the Irvine property in 1977, he has since bought out all but four partners. Twice divorced, he is a skier and pilot.

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
SEBASTIAO FERRAZ DE CAMARGO PENTEADO 78 page 185	São Paulo BRAZIL	**$1.2**	**Dominant shareholdings in 25 companies in construction, mining, ranching, banking, and more.** The wealthiest Latin American is the orphaned son of a farmer. Camargo dropped out of school, labored on a road gang, then went on his own as a roadbuilding subcontractor. Moved up to railroads and dams. Terrifies subordinates, wears ready-made suits, and at 78 still appears fully in charge. Three daughters.
WILLIAM K. COORS 71 **JOSEPH COORS** 70 Page 152	Golden COLORADO	**$1.2**	**72% of Adolph Coors Co.** The brothers built a regional brewery, founded by their grandfather in 1873, into the fifth-largest U.S. brewery. Bill is chairman, while Joe, an ultraconservative, is vice chairman of the company. Two of Joe's sons now manage day-to-day operations.
MICHEL FRIBOURG 74 Page 160	New York NEW YORK	**$1.2**	**90% of Continental Grain.** Fifth-generation heir to a Belgian commodities firm, Fribourg expanded Continental's share of world grain trading to about 20%. The family fled Belgium before the Nazi occupation. Fribourg served with U.S. Army Intelligence. A remarried widower; five children.
WILLIAM H. GATES III 31 Page 148	Seattle WASHINGTON	**$1.2**	**40% of Microsoft.** Fidgety and awkward, this brainy Harvard dropout ranks among the most influential visionaries of the microcomputer revolution. Microsoft, the company he co-founded, has grown into the largest independent personal computer software company, ahead of Lotus Development. An eligible bachelor who drives too fast.
GORDON PETER GETTY 53 Page 153	San Francisco CALIFORNIA	**$1.2**	**Trusts, inheritance, investments.** The fourth son of billionaire J. Paul Getty and only family member at the bedside when he died, Gordon Getty sold the family's 40% stake in Getty Oil to Texaco in 1984 for $4 billion. Trying to stay aloof from the Pennzoil-Texaco imbroglio that followed, he prefers to be at his Yamaha piano composing operas. Lives with wife Ann and four sons in a six-story, 25-bedroom mansion overlooking San Francisco Bay.
GIOVANNI AGNELLI 66 Page 172	Turin ITALY	**$1.1**	**14% of automaker Fiat (1986 sales: $22 billion); insurance; department stores; publishing; concrete; and more.** Grandson of Fiat's founder, Agnelli has maintained the family fortune through uncertain political times. Brother Umberto, 52, is vice chairman of Fiat. One son, one daughter.
KARL ALBRECHT 67 **THEO ALBRECHT** 65 Page 176	Essen WEST GERMANY	**$1.1**	**ALDI discount stores in West Germany, Austria, Belgium, the Netherlands, and Denmark; Benner Tea Co., an Iowa-based U.S. company.** The Albrechts' mother started a small grocery store in Essen; her sons branched out. Both brothers are married, each with two sons in the business.
KATHARINE MEYER GRAHAM 70 **DONALD EDWARD GRAHAM** 42 Plus other family members—page 156	Washington D.C.	**$1.1**	**35% of Washington Post Co., which owns Newsweek and four TV stations as well as the paper that broke the Watergate story.** Kay Graham's father, investment banker Eugene Meyer, bought the bankrupt *Post* in 1933. She became CEO in 1963 after the suicide of her husband, Philip, and has won her peers' admiration. Son Don, a Harvard graduate, Vietnam veteran, and former Washington, D.C., policeman, joined the business in 1971. Now the *Post's* publisher, he has four children.
MILTON PETRIE 85 Page 142	New York NEW YORK	**$1.1**	**Petrie Stores Corp.** Tightfisted at the office (the Secaucus headquarters are spartan) but extravagant at home (Jackie O's decorator did his Manhattan apartment), the Grand Old Man of rag-trade retailing started with a single hosiery store in Cleveland and has been reluctant to let go. His aristocratic fourth wife, Carroll (former Marquesa Carroll de Portago, whom he married in 1979), has a passion for decorating, lavish parties, and a poodle named Peaches who wears puppy perfume and pearls (his bulldog wears neither). His charitable gifts are often headline grabbers: cash to slashed model Marla Hanson and $10-million gifts to Beth Israel Hospital and Sloan-Kettering Memorial. One son, two daughters.
W. GALEN WESTON 46 **GARFIELD WESTON** 60 Page 183	Toronto ONTARIO London ENGLAND	**$1.1**	**59% of George Weston Ltd.: Loblaw supermarket chain (400 stores), National Tea Co., E.B. Eddy Forest Products, 100 other subsidiaries; Associated British Foods, which has 140 subsidiaries.** Grandsons of an Ontario baker who founded George Weston Ltd. 105 years ago, Galen and Gary split management duties. Galen runs North American operations but owns castles in Ireland, where he rides to hounds, and England, where he plays polo with royalty. Gary runs the Britain-based companies, "everything from hot dogs to popsicles." Galen has two children, Gary six.

BILLIONAIRES

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
WALTER H. ANNENBERG 79 Page 156	Wynnewood PENNSYLVANIA	**$1.0**	**Triangle Publications, owner of *TV Guide, Seventeen,* and the *Daily Racing Form.*** Magazine magnate, Reagan chum, and Ambassador to the Court of St. James's under President Nixon, Annenberg redeemed the family name and rebuilt its fortune after the conviction of his father, Moses, for tax evasion. Maintains a priceless collection of impressionist masterpieces at his 273-acre estate in Rancho Mirage, California.
PHILIP FREDERICK ANSCHUTZ 47 Page 153	Denver COLORADO	**$1.0**	**100% of Anschutz Corp. (investments in oil exploration, coal and uranium mining, real estate, railroad, and stocks).** Anschutz inherited a 75,000-acre Colorado ranch where oil was discovered in 1978. A cigar chomper and squash player, he hopes to build a $102-million convention center in downtown Denver. Collects Western art. Three children.
PRINCE SULTAN BIN ABDUL AZIZ 61 Page 169	Riyadh SAUDI ARABIA	**$1.0**	**Saudi Arabia's oil riches.** As minister of defense, Prince Sultan controls the largest single item in the Saudi budget: $150 billion in ten years. Oversees a vast patronage system. No count available on children.
MARVIN DAVIS 62 Page 153	Beverly Hills CALIFORNIA	**$1.0**	**100% of Davis Oil Co.; investments in entertainment and real estate.** Once Denver's "King of the Wildcatters," Davis sold Twentieth Century Fox to Rupert Murdoch. Owns the Beverly Hills Hotel and lives with his wife in a mansion he bought from country singer Kenny Rogers. Five children.
DONALD G. FISHER 59 Page 142	San Francisco CALIFORNIA	**$1.0**	**41% of the Gap Inc. (Gap, GapKids, and Banana Republic clothing stores).** Starting as a contractor and renovator, Fisher turned to retailing in 1969. His wife, Doris, and two sons are in the business, as are old friends from high school and Berkeley, where he was a water polo star.
ERNEST GALLO 78 **JULIO GALLO** 77 Page 152	Modesto CALIFORNIA	**$1.0**	**100% of E.&J. Gallo Winery (estimated 1986 revenues: $1 billion).** The Gallo brothers produce more wine than anyone else in the world: 25% of all consumed in the U.S. Skeptical of diversification, they make only wine, wine coolers, and brandies. Between them they have four children.
SIR JAMES GOLDSMITH 53 Page 182	London ENGLAND	**$1.0**	**$800 million in cash; two million acres of North American timberland.** Jimmy Goldsmith walked away from a raid on Goodyear last year $93 million richer. Physically impressive: 6 feet 3 inches. A two-family man, Goldsmith amicably divorced his French wife (two children) in 1978 to marry his English mistress (three children). Son of an English M.P., he was knighted in 1976 on the recommendation of Labor Prime Minister Harold Wilson.
RAY HUNT 44 Page 153	Fort Worth TEXAS	**$1.0**	**100% of Hunt Oil Co.; real estate; other investments.** Leader of H. L. Hunt's "second family," children of H. L. and Ruth Ray, and chairman of Hunt Oil. Has no significant business ties to the first family. Staying clear of his half-brothers' creditors seems to be his main occupation.
AHMED JUFFALI 58 Page 169	Riyadh SAUDI ARABIA	**$1.0**	**E.A. Juffali & Brothers, the largest private business in the Arabian Peninsula (600 contracting and industrial subsidiaries); 60% of the company's revenue comes from Daimler-Benz franchise.** Orphaned as a child, Juffali got his start by winning a contract in the 1940s on a project to electrify Arabian cities, eventually bringing the juice to Mecca.
LEE SENG WEE 57 Page 162	Singapore SINGAPORE	**$1.0**	**25% of Oversea-Chinese Banking Corp.; rubber and pineapple plantations in Malaysia; real estate in Singapore.** An MBA from the University of Western Ontario, Lee inherited his fortune from his father. "I suppose I enjoy a dull life," he says, and few people recognize him on the streets of Singapore. Has two brothers, two sons, and a daughter.
SAMUEL JAYSON LEFRAK 69 Page 138	New York NEW YORK	**$1.0**	**Real estate, including 89,800 apartments; Texas oil and gas ventures; an entertainment company that owns rights to music in the show *Cats.*** The biggest U.S. private residential landlord, LeFrak is a third-generation builder. A $10-billion LeFrak community is rising on the bank of the Hudson in Jersey City, New Jersey. Besides office space, he plans to put up some 10,000 apartments, a hotel, a 1,000-boat marina and a shopping mall.
SALVATORE LIGRESTI Page 172	Milan ITALY	**$1.0**	**Controls SAI, an insurance giant; 100% of a real estate project near Milan; 50% of a toll road between Turin and Milan; and more.** Sicilian-born, Ligresti is known as the Donald Trump of Milan—despite being known also as "master of the low profile." Keeps even his age secret.

NAME AGE		**WEALTH** ESTIMATED IN BILLIONS OF U.S. DOLLARS	**SOURCES OF WEALTH** AND BACKGROUND
SALIM A. BIN MAHFOUZ 80 Page 169	Mecca SAUDI ARABIA	**$1.0**	**52% of National Commercial Bank, Jiddah; 30% of BCCI Holdings of Luxembourg (banks and other financial institutions).** A foreign exchange dealer, Mahfouz got started on the road to wealth in 1954 by convincing King Abdul Aziz to let him set up the first Saudi-owned bank. NCB is now the biggest bank in Saudi Arabia.
ROGER MILLIKEN 71 **GERRISH MILLIKEN** 70 Page 160	Spartanburg SOUTH CAROLINA New York NEW YORK	**$1.0**	**Own Milliken & Co. (annual revenues: $2 billion).** The formerly reticent Roger Milliken, CEO of the textile maker, is now the driving force behind the buy-American "Crafted With Pride in the U.S.A." movement. Once a staunch free-trader, he is all for import restrictions today, especially against China. The brothers' grandfather started Milliken as a Maine-based dry-goods store, expanded into manufacturing. Roger lives with his wife in a modest brick house in Spartanburg, has five children. Gerrish, based in New York City, is general manager of the company.
Y. K. PAO 68 Page 162	HONG KONG	**$1.0**	**15% of Standard Chartered Bank in London, worth over $300 million; extensive shipping and real estate interests.** Pao built one of the world's largest independent tanker fleets, deftly shifted into real estate and banking before the shipping business collapsed in the early 1980s. Often makes strategic decisions during Sunday family dinners. Four daughters.
SIR JOHN SAINSBURY 59 **DAVID SAINSBURY** 46 Page 182	London ENGLAND	**$1.0**	**More than 50% of Sainsbury's, Britain's largest grocery store chain, with 271 stores (annual sales: $6.5 billion).** Sir John is chairman and CEO; cousin David is finance director. David helped bankroll the birth of a new, slightly left political party, the Social Democrats, in 1981. Oxford-educated Sir John, meanwhile, concerns himself with watching the shop. He personally tests all products sold under the Sainsbury brand name.
JOHN RICHARD SIMPLOT 78 Page 152	Boise IDAHO	**$1.0**	**100% of J.R. Simplot Co., world's largest potato grower and processor, as well as producer of chemicals, fertilizer, beef cattle, frozen fruits and vegetables.** An eighth-grade dropout, Jack Simplot grew up in a one-room log cabin on the banks of the Snake River. While still in his teens, earned enough raising pigs to start a potato-processing business, using newfangled electric potato sorter. A daredevil on the ski slopes and a fiercely competitive gin rummy player.
ABDUL AZIZ AL SULIMAN 48 Page 169	Jiddah SAUDI ARABIA	**$1.0**	**Jiddah's Bank Al Jazira; widely diversified investments, including Nissan's Saudi distributorship, Meridien Hotels, Caribbean cement plants, and ships.** Suliman is the son of Saudi Arabia's first finance minister, to whom the government granted a monopoly in cement in the 1940s. Married to a Lebanese; no number available on children.

WHAT LIES BEHIND THE NUMBERS

The estimates of net worth on this list are based on published information where available and appraisals of asset values where figures are not published. To qualify for inclusion on the list, a candidate must have a net worth—total assets after subtracting debt—of $1 billion or more. For those with holdings in publicly traded companies, the value of their shares was computed using the closing price on September 1. Currency conversions into U.S. dollars were based on September 1 exchange rates.

To determine the value of holdings in private companies, FORTUNE identified public companies that are similar, made reasonable adjustments for any dissimilarities, and calculated a market value for the private companies based on the going market value for their public counterparts. Where information is lacking for ownership of shares in private companies, we used estimates by persons knowledgeable about the companies and individuals involved.

The candidates had to be either individuals or a "nuclear" family composed of husband and wife, parent and child, siblings, or some combination of those relationships. We tried to exclude cousin and in-law relationships, although in some cases, such as those involving brothers and their children in a single business, the children are obviously cousins with a stake in a single fortune.

We are indebted to our correspondents around the world for their diligent pursuit of information about candidates. Among the sources outside the Time Inc. network were: Middle East—Michael Field, a London business consultant and author of *The Merchants;* France—*L'Expansion* magazine; Netherlands—Jos. R.M. van Hezewijk, CIOD databank, Uden.

The data-gathering and checking were supervised by FORTUNE associate editor Lorraine Carson, assisted by reporters Mark Alpert, Edward C. Baig, Jonas Bernard Blank, Rosalind Klein Berlin, Leslie Brody, Christopher Knowlton, Stephen J. Madden, Alicia Moore, and Charles Riley II.

BY JOHN PAUL NEWPORT JR.

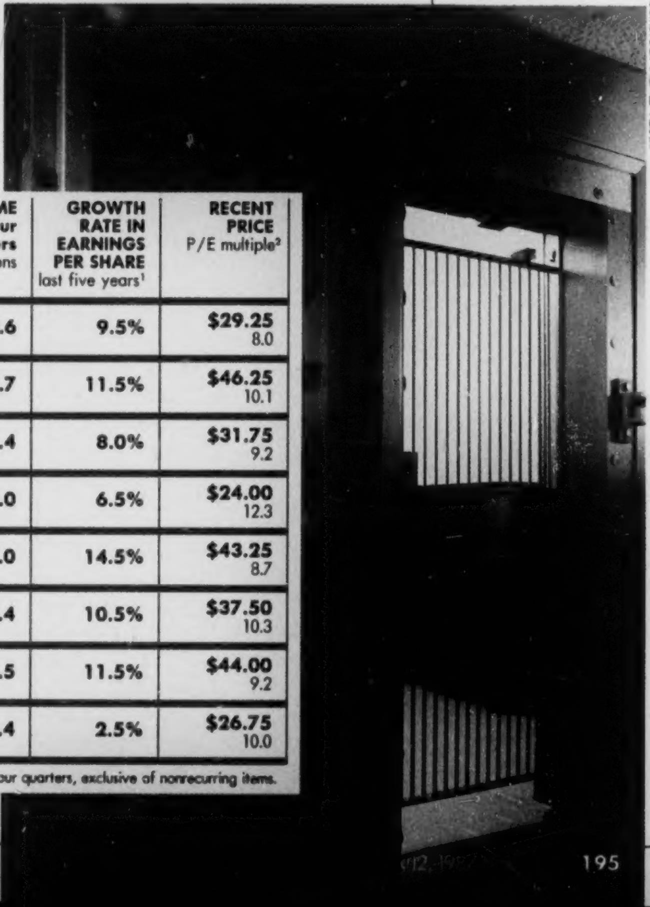
HIDDEN RICHES IN REGIONAL BANKS

Many are rock-solid, and their stocks are cheap. But investors may have to wait a bit for the payoff.

■ If one of the thrills of investing is finding a rare group of undervalued stocks, regional banks deserve cries of "Eureka!" For two years up to the spring of 1986, they outperformed the market handily. But since then the group has been as flat as an empty checking account, while Standard & Poor's 500-stock index has floated 35% higher. The result is what bank analyst George Salem of Prudential-Bache calls "a bargain-hunter's paradise."

The bargains may not be ignored much longer. Many analysts expect regional bank stocks to jump 20% to 30% in the next 18 months, even if the rest of the market stands still. But for now, investors' attitudes toward banks have chilled with the rise in interest rates, which can spark more loan defaults. Regional bank stocks, which have long moved up and down with all bank stocks, are also victims of scare headlines. Reports of defaulting Third World loans, punishing additions to loan loss reserves, and a record number of bank failures have tarred the regionals unfairly. The bad news mostly affects money center banks and smaller banks in the oil patch and farm areas. Says Thomas Hanley, a Salomon Brothers banking analyst: "In my experience, investors do not discriminate sufficiently between the money center banks and the regionals."

Some analysts believe the regionals may begin to fly as large institutional investors' current infatuation with big-name cyclical stocks subsides and they rummage elsewhere for value. A topping-out of interest rates could also remove a stigma from bank stocks. In either case, significant price appreciation will probably take six months or longer. That provides a perfect opportunity for the patient small investor willing to buy now while the big boys remain preoccupied with producing steady short-term gains to please pension funds and other clients. John Templeton of Templeton mutual fund fame, an ace at picking undervalued stocks, is accumulating regional bank shares now. Says he:


COMSTOCK INC—ED PERATT

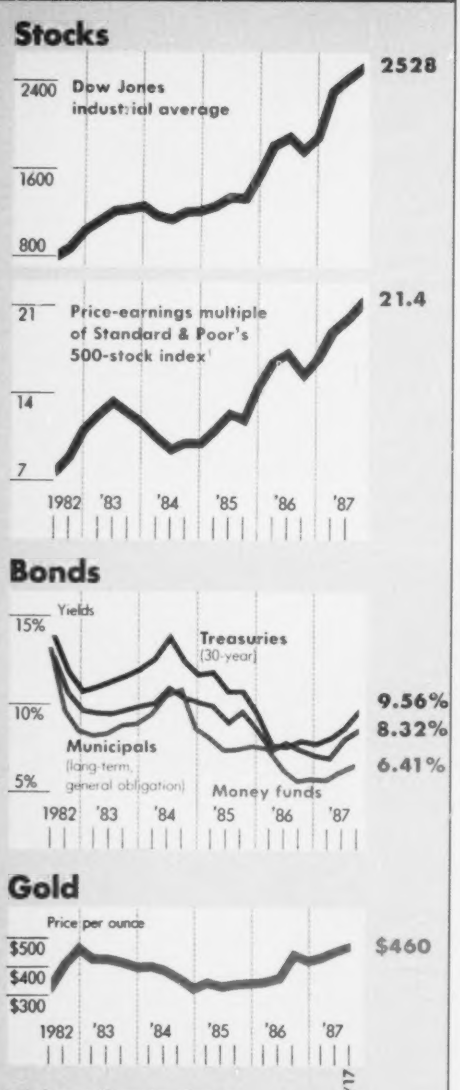
Eight That Appeal

Most of these bank companies, none with significant bad-loan problems and nearly all growing at impressive rates, sell at price-earnings multiples only half the market's. They also pay above-average dividends.

COMPANY	ASSETS 6/30/87 in billions	NET INCOME latest four quarters in millions	GROWTH RATE IN EARNINGS PER SHARE last five years[1]	RECENT PRICE P/E multiple[2]
First Bank System	$28.4	$59.6	9.5%	$29.25 8.0
PNC Financial	$28.2	$227.7	11.5%	$46.25 10.1
Bank of New England	$27.0	$177.4	8.0%	$31.75 9.2
SunTrust Banks	$25.6	$256.0	6.5%	$24.00 12.3
Midlantic	$16.8	$142.0	14.5%	$43.25 8.7
Sovran Financial	$16.4	$155.4	10.5%	$37.50 10.3
MNC Financial	$15.0	$129.5	11.5%	$44.00 9.2
U.S. Bancorp	$9.0	$82.4	2.5%	$26.75 10.0

[1]SOURCE: VALUE LINE [2]Multiple based on earnings for the latest four quarters, exclusive of nonrecurring items.

STATE OF THE MARKETS



End-of-quarter figures throughout
¹Based on earnings for the latest four quarters.

SOURCES: SALOMON BROTHERS, BOND BUYER, DONOGHUE'S MONEY FUND REPORT, COMMODITY EXCHANGE

"We believe that these stocks will sell again at their normal values."

One of the largest and most successful companies is **PNC Financial Corp.**, which runs major banks in Pittsburgh, Philadelphia, and Louisville and recently agreed to acquire Central Bancorp. of Cincinnati. It epitomizes the new breed of so-called super-regionals formed by mergers across state lines. Some investors, like John Neff of the Vanguard mutual fund group, worry that the frenzy for expansion into interstate banking is leading many banks to shortchange shareholders. The banks acquire at a premium price, usually by issuing new shares. This can temporarily dilute profits and slow earnings-per-share growth. "The super-regionals are super-diluters," Neff contends. But PNC, like most of the others in the table, has managed to expand without seriously diluting earnings. Salem of Prudential-Bache believes the stock could surge from $47 lately to $70 next year.

Many super-regionals excel because they operate in super regions. The management at **SunTrust Banks**, which recently passed North Carolina's NCNB Corp. to become the largest bank holding company in the booming Southeast, appears to have called off further acquisitions for now and is focusing instead on profitability. With population growing and businesses prospering on the company's turf in Georgia, Florida, and Tennessee, SunTrust's loan business is flourishing.

After two years of rapid acquisitions in four New England states, Boston-based **Bank of New England** seems ready to settle down and enjoy its premier franchise in perhaps the best banking market in the U.S. The company makes four-fifths of its loans in its own backyard, which has the country's highest per-capita income and lowest unemployment rate. Analyst Dennis Shea of Morgan Stanley expects investors to earn a 25% to 30% total return by the end of 1988.

Another regional pick, **First Bank System**, serves six states from its base in Minneapolis-St. Paul. It has more outstanding loans to Third World countries than most regional banks—3% of its portfolio—but in the second quarter it increased reserves (taking a big earnings hit) to cover fully half of those loans. Thomas K. Brown, bank analyst at Smith Barney, likes First Bank System because management "runs the company like a business, not like a bank. It works for the shareholders."

Hanley of Salomon Brothers recommends four smaller banks that he thinks could grow into super-regionals. His favorite is Oregon's **U.S. Bancorp**. A resurgent local economy, a management reorganization, and three bank acquisitions in Washington State have dramatically improved the company's outlook in the past year, Hanley says. **Midlantic**, created in January by the merger of bank holding companies in Edison, New Jersey, and Philadelphia, benefits from booming business in the areas it serves. Hanley says that, with loans way up, loan losses waning, and control of expenses tightening, Midlantic's earnings per share should grow 12% annually over the next five years.

The other two emerging super-regionals that Hanley likes serve the affluent Washington, D.C., area. **MNC Financial** owns Maryland National Bank, which has a strong consumer operation, and Washington's American Security Bank, which specializes in making loans to medium-size companies. A $2-billion credit card business and other nonbank activities should help earnings growth. **Sovran Financial**, in Norfolk, Virginia, recently agreed to acquire fast-growing, conservatively run Commerce Union Corp. ($4.2 billion in assets) of central Tennessee. Sovran's loan portfolio is one of the soundest in the country.

TWA Without the Wings and Woes

■ Wall Street seems to have lost track of **TW Services Inc.** That's understandable but a pity. The New York company shed Trans World Airlines in 1984 and became known as Transworld Corp. Last December, threatened with a takeover by Revlon Chairman Ronald Perelman, it sold off the Hilton International hotel chain and rechristened itself TW Services Inc.

When the genealogy gets that complicated, the analysts tend to lose interest. As a result, TW Services' recent price of $20 on the New York Stock Exchange may not reflect the promise the $3.4-billion-a-year company is showing in the fast-growing restaurant and food-catering businesses. Alan Snyder, head of Snyder Capital Management of San Francisco, says Wall Street hasn't caught on to TW's potential. "I'm excited," he says. James J. Murren of New York's Cyrus J. Lawrence Inc., one of the few analysts who does follow the company, agrees with Snyder that earnings per share will go up from an estimated $1.20 this year to $1.60 in 1988. Both Snyder and Murren put the breakup value of TW Services at $31 or more.

■ AMERICA'S BEST SALESMEN • NEW KICK IN COKE • FOOTBALL'

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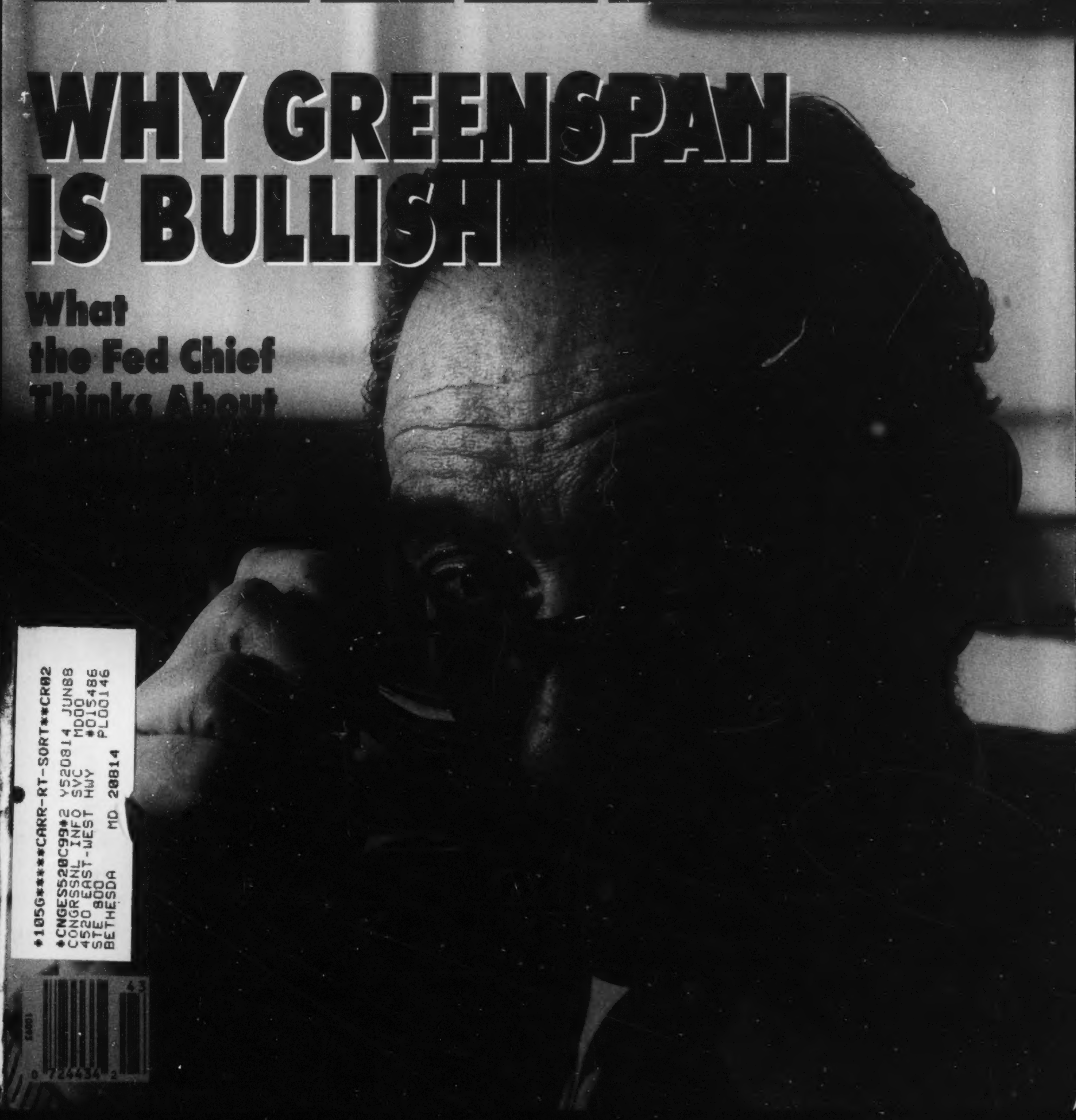

WHY GREENSPAN IS BULLISH

What the Fed Chief Thinks About

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OCTOBER 26, 1987
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"What we are seeing is an extraordinarily successful market adjustment to a lot of problems."

PAGE 28

"It's more important that Coke's name is on its best-tasting product than its best-selling product."

PAGE 46

"If you only focus on how to build a big business, you tend to skip those things that will help you in the long run."

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"It's too bad you have to play defense on the field and off."

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"I do love to sell. It's excitin'. It gets into your blood."

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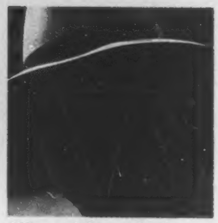
"I'm neither a bull nor a bear. I'm just perplexed. I don't know where *anything* is heading."

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THE EDITOR'S DESK

KRISTINE LARSEN

Sylvia Nasar, Greenspan forecaster

HE HOLDS what has been called the second most important job in the U.S. His decisions can affect everything from the size of your monthly car payment to the profitability of the bank that gave you the loan. So what does Alan Greenspan, America's top money manager, think about prospects for inflation, recession, the dollar, and the Third World debt? To find out, writer Sylvia Nasar interviewed dozens of the Federal Reserve chairman's closest professional and personal associates and other sources to whom Greenspan has confided his views in detail. Her conclusion: The new Fed chairman is far more bullish about the economy than he usually is thought to be (see page 28). That should come as no surprise to those who know him well. Says Nasar, who has interviewed him several times over the years: "Greenspan is an entrepreneur at heart, and you can't be an entrepreneur unless you are optimistic about growth."

The Fed chairman is no stranger to FORTUNE. In the 1950s and 1960s, long before he became famous, he was a frequent contributor to these pages. Working as a research consultant, he analyzed key indicators—from steel inventories and mortgage debt to teenage employment and defense spending. When we decided to launch a ten-part series on the Economy of the 1980s, we began by asking Alan to do a ten-year forecast. During the year that followed, we pestered him constantly. Then as now, Greenspan was a virtuoso at assimilating vast quantities of data and producing prescient insights. He was also unfailingly good-natured.

His approach, says Nasar, is strikingly like the one we use at FORTUNE, which alone among major publications makes comprehensive forecasts from our own model of the U.S. economy. Nasar's reading of the statistics streaming across her desk gives her equal cause for optimism. In our September 14 cover story, which examined the U.S. standard of living, she concluded that most Americans are vastly better off than they were a generation ago.

A member of the Fortune Forecast staff since 1983, Nasar brings some quite remarkable credentials to the job. The daughter of an Uzbek father and a German mother, she was born near Munich, immigrated to the U.S. as a child, lived in Turkey as a teenager, and attended Antioch College in Yellow Springs, Ohio, majoring in literature. She earned her master's degree in economics in 1976 at New York University, where she later worked with Nobel laureate Wassily Leontief in developing a model of the U.S. economy. Although now a journalist, Nasar is wedded to economics in more ways than one: She is married to Darryl McLeod, an economics professor at Fordham University.

Marshall Loeb
MANAGING EDITOR

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THE ECONOMY/FORTUNE FORECAST

A GENTLE WARNING FOR OPTIMISTS

As the Fed chairman says, the economy is still healthy. But consumers are tapped out for now. Some retailers may be in for a less than merry Christmas.

■ *by Vivian Brownstein*

WHILE WE are not as optimistic as Alan Greenspan, FORTUNE concedes that 1987 has been a pretty darned good year—so far. Take the third quarter, for example. The Commerce Department no longer publishes an early "flash" report on economic growth, but according to our own analysis of the available numbers, GNP expanded at nearly a 3% annual rate, a substantially stronger showing than was looked for a few months ago. Here's the catch. Some of the growth was borrowed from the fourth quarter, which will be anemic, pulling the expansion for the year as a whole down to around 2.5%.

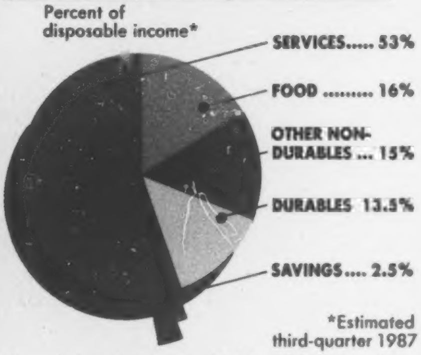
All but one major sector contributed to the extra third-quarter strength, the exception being a temporary widening of the trade deficit. But consumers made the biggest difference—and therein lies the potential snag.

The increase in consumer purchases of goods and services hit a 5.5% annual clip in the third quarter, much too fast a pace to last. Outlays for cars and trucks jumped nearly 35% as buyers responded to the latest round of sales incentives. But that doesn't tell the whole story. Spending for other durable goods, such as toys, boats, and even pleasure aircraft spurted, as did clothing purchases and outlays for services. Spending on furniture and household appliances continued to expand, but at a tamer 2% pace.

JOHN S. ABBOTT

Goods need services: *Consumers splurged on cars this summer—and on lube jobs.*

WHERE THE MONEY GOES . . .



Americans spend astonishingly little on food—even counting dinners out—and an ever-increasing amount on services.

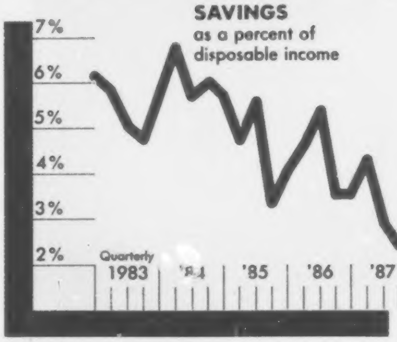
The pie chart at left indicates how income was allocated among broad categories in the third quarter, but the pieces of the pie wouldn't slice up much differently for any recent period. In fact, spending on durable goods accounts for about the same share of income as it did ten, 20, or even 40 years ago, give or take a percentage point or two. Other categories have changed dramatically over time, but the change has been gradual for the most part. For example, consumers devoted 30% of their after-tax income to food four decades ago. Food takes only half that share now. Surprisingly, despite the much talked-about trend toward eating out, consumers spent only 5% of their disposable incomes eating in restaurants, about the same as always.

The only growing segment is services. More than 50% of the consumer dollar is spent on services now, compared with 30% earlier. That share grew fairly slowly for years, but has accelerated during the 1980s. Within services, some 65% of today's spending is on essentials such as medical care, rent, electricity, and other housing costs, an allocation that has stayed fairly constant over the years Interest on consumer installment and bank card debt, which amounts to some 3% of income, is included with services in the chart. The fastest-growing services include legal fees and payments to brokers and investment advisers.

The summer spending spree pulled the savings rate down to 2.5%, the second-lowest on record. Economists remain puzzled about the savings slump that began in 1984 after a long period of stability. In 1985 and 1986 savings averaged 4.5% of disposable income. Before then it came to less than 5% of income only twice, way back in the late 1940s, and it has rarely dropped below 6%.

One reason for the recent low rate can be discerned: the combination of a slow growth

. . . AND WHERE IT DOESN'T



Confident about the future, consumers have been putting aside less of their incomes. Savings won't go lower, but won't bounce back far.

in income and a buoyant level of consumer confidence. After adjusting for inflation, disposable income is lower now than it was last winter, and probably lower than consumers expected. According to surveys by the Conference Board and Sindlinger & Co., consumers have been growing more optimistic about job and earnings prospects since late spring. As long as they think incomes will pick up, Americans may continue to spend as though they already had the fatter paychecks.

Income from a couple of important sources appears to be accelerating. For one, the rise in interest rates has boosted interest income at a 5% annual rate so far this year. Interest income was declining during most of 1987. And the reversal is occurring while bank credit card rates are still coming down, belatedly. For consumers that adds up to a twofer. More important, wages and salaries seem to be coming out of the doldrums. With unemployment now below 6%, many employees are feeling freer to press for higher pay. Hourly earnings advanced at a 4% annual rate during the summer, twice as fast as in the prior twelve months.

FORTUNE expects real disposable income to advance by a 3% annual rate for the rest of this year, and at a slightly slower 2.7% pace during 1988. Incomes will get a boost from lower tax rates, which go into effect on January 1, but inflation will take a bigger bite out of nominal earnings next year. Still, after a year of stagnation, the new trend is happy news for the average household. Whether or not consumers are in fact cheered depends in part on their expectations—a real factor, though hard to measure. If a disparity between what consumers expect and what they get persists, optimists might still turn into pessimists and spending into saving.

Builders are feeling the pinch from higher interest rates. FORTUNE found them to be a mild bunch of bears, disappointed but not yet growling.

FORTUNE'S FALL SURVEY OF HOME BUILDERS

	1986 ACTUAL in millions of units	1987 EST.	PERCENT CHANGE	BUILDERS' PROJECTIONS FOR 1988 in millions of units	PERCENT CHANGE (1987-88)
Total housing starts	1.81	1.64	−9.4%	1.56	−4.9%
Single-family homes	1.18	1.16	−1.7%	1.08	−6.9%
Apartment units	.63	.48	−23.8%	0.48	0
Mortgage rate (year-end)	9.3%	11.0%	—	12.0%	—

Though continuing to cast a watchful eye as others are doing, FORTUNE thinks savings will stay below old norms for at least another year. Now that sales of domestic cars have returned to their pre-incentive pace of 7 million to 7.5 million units a year from the 8.7 million August rate, savings will bounce back, but not far. The rate will average only 3.2% this year and next. After a breather in the fourth quarter that may mean a gloomy Christmas for some retailers, consumers will come back to the market, increasing spending at a 2.5% annual pace during 1988.

The money spent to buy a house is considered a capital investment and so does not appear on our pie chart of spending. Yet the outlook for an industry that accounts for more than 5% of the nation's GNP is obviously important to any economic forecast. In FORTUNE's semiannual survey we found the homebuilders to be a mild bunch of bears, disappointed but not yet growling.

Builders of single-family houses, feeling the pinch from higher interest rates, expect to start construction on some 7% fewer units during 1988 than they are putting up this year. Six months ago, when mortgages could still be had for under 10%, they expected a rosier picture. Now, despite an uptick in the number of new homes sold during the summer, 40% of the builders surveyed say they have already experienced a weakening in their sales. They also report that sales of existing homes, a broad measure of the industry's health, is softer than six months ago. What's worse, they expect another percentage point increase in mortgage rates next year, on top of the two-point rise that has already occurred.

APARTMENT builders, however, think that they have seen the bottom and are looking up. They expect to construct some 480,000 units next year, about the same as in 1987. Builders in some formerly hot areas, such as Boston, say their market has cooled considerably. But in general they report that vacancy rates in both new and existing apartment houses are lower, although little decline in the national vacancy rate compiled by the Census Bureau has shown up yet.

Builders' expectations for a total of some 1.6 million new housing starts is likely to be close to the mark. They could be too pessimistic about next year's mortgage rates, but only by a smidgen. FORTUNE thinks rates could actually dip a bit before going up again later in 1988.

Still, consumers who already own homes may have less flexibility to trade up to a bigger and better house than they once had, and that could dampen the market for new homes. A new wrinkle that could prove bothersome is the home-equity loan. Since the loans are secured by the value of the home, rates are low. But consumers are pledging the equity in their homes to finance everything from college educations to Caribbean cruises—everything, that is, except more real estate.

Outlays for residential construction, lagging behind the earlier decline in housing starts, have been falling for most of the year. But the drag on overall economic growth from the sag in housing has been milder than feared. If housing starts do no worse than builders expect, the volume of construction spending will level off by early next year.

So where does that leave the outlook for 1988? With a respectful bow to the chairman of the Federal Reserve, we expect only modest growth. We agree with the chairman that neither recession nor ravaging inflation is on the horizon. ■

CHIEF ECONOMIST *Todd May Jr.*
ASSOCIATE ECONOMIST *Vivian Brownstein*
STAFF ECONOMIST *Sylvia Nasar*
RESEARCH ASSOCIATES *Catherine Comes Haight, Lenore Schiff*

LABOR

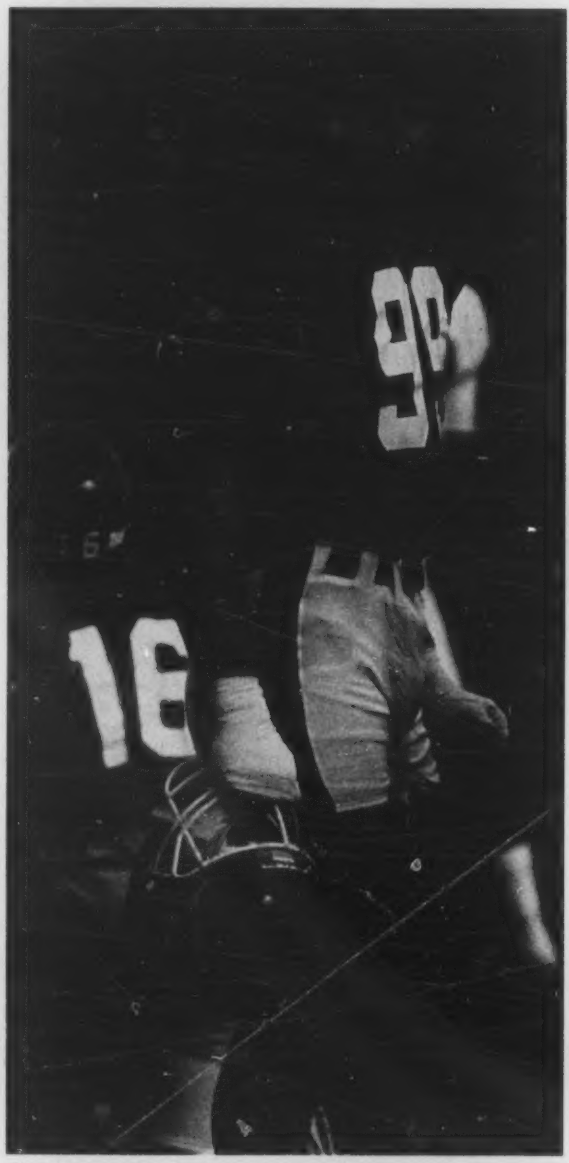
THE LIFE OF A $725,000 SCAB

It takes a special kind of worker to cross a union picket line. Especially one full of 250-pounders. Mark Gastineau, the New York Jets defensive end, is a management's dream. ■ *by Bill Saporito*

A STRIKE is one of the more intense emotional experiences available to an American worker, and Mark Gastineau, defensive end for the New York Jets—a 6-foot 5-inch, 235-pound unit of labor—is starring in the one against the National Football League. As one of the game's premier—and best-paid—pass rushers, he gained notoriety for his "sack dance," a manic bit of high stepping executed near the wreckage of quarterbacks he caught and crumbled. Now Gastineau, superstar, has become Gastineau, superscab.

A name-brand player who crossed the picket line on the strike's first day, Gastineau, 30, attracted more attention than a goal-line fumble. Players on other teams vilified him—"He has an IQ of about room temperature" is how Chicago Bears defensive lineman Dan Hampton delicately put it—and his own teammates, peers now picketers, made no effort to conceal their anger. A contest pitting a bunch of well-compensated, no-neck entertainers against a millionaire boys' club for possession of the nation's fall sporting ritual is hardly the United Auto Workers against General Motors. But it summons up many of the same issues, including the question of what makes one man walk the line and another break ranks with his fellow workers.

As in any strike, the success of this one depends on the ability of the union—the National Football League Players Association—to instill in its members a sense of right, of shared values and goals. To do this the union must make it socially, psychologically, or—especially in this case, perhaps—physically uncomfortable for anyone to desert the pack. For the owners the game is simpler: Divide and conquer. By using strikebreakers they hope to destroy the players' faith in the union's ability to prevail.


ANDREW POPPER

Gastineau, the lone end: *"I'm willing to pay the price."*

A football team is a peculiar kind of labor force. It is organized labor by definition, yet its members are both more and less cohesive than many workers. The importance of the team, something drilled into each player since Pop Warner League, has a powerful hold. Many players spoke out against the strike but didn't want to cross the picket line if it meant losing the respect of their teammates.

OTHER FACTORS pull the workers apart: For one, there is an enormous disparity in wages. Similarly, while the players are striking for the same things—higher minimum salaries, better pensions, and the freedom to shop their talents to the highest bidder—winning would mean vastly different things to different people. Throw in the fact that most players are young, have no previous strike experience, and no strike fund to bolster them in time of need, and a betting man would be tempted to take the owners, giving a six-point spread.

Gastineau, who clashed with his teammates even before the strike, fits the personality profile of a scab. He says his co-workers just don't understand him: "Players have been upset with me before. There are times when they didn't believe things I've stood for. It started with the dance. That was something I did out of emotion. They didn't like it." In the NFL, where defensive linemen are expected only to grunt and square the ball carrier with the horizon, Gastineau's behavior was considered unlinemanlike. "Mark has always been a flamboyant person who craved the limelight," says Kurt Sohn, the Jets shop steward and wide receiver. "And at times it appears he is more concerned with publicity than playing football."

SINCE GASTINEAU arrived in the league in 1979, he has not been modest about his abilities, nor has he needed to be. Possessing frightening speed on a chassis that is Muscle Beach prime, he makes opposing quarterbacks feel as though they are being pursued by a rock slide. In his first season as a starter, in 1980, he mashed opposing quarterbacks 11½ times (the half means a teammate joined him in the kill). The next year he led the league in sacks with 20; following the strike-shortened 1982 season, he again led the league in 1983. In 1984 he had 22 sacks, an NFL record. His play brought him a $4-million contract ($725,000 a year plus incentives), with a lifestyle to match. Gastineau models for posters, endorses products, and exhibits the kind of flash once associated with a guy named Broadway Joe Namath. He tooled up to practice one day in a $156,000 Rolls-Royce and kept himself warm in an $11,000 fur coat.

A character like that is a cause for worry to any picket captain. "People cross the picket line for a number of reasons," says Lewie Anderson, vice president of the United Food and Commercial Workers Union. "They don't feel loyalty to their co-workers, they don't agree with the aims of the group, or they think they can protect themselves." Anderson thinks the American tradition of rugged individualism reinforces strikebreaking.

In explaining his decision to cross the line, Gastineau said he felt more loyalty to Jets owner Leon Hess than to his teammates. Hess, who moonlights as chairman of Amerada Hess Corp. (oil, natural gas, $4 billion a year in sales), signed Gastineau to his contract in 1984 and, in Gastineau's eyes, cares more about him than do some of the green-and-white shirts. "There have been things said about me in the papers by my teammates, but never by Mr. Hess," says Gastineau. "He visited me in the hospital last year [after knee surgery]. Those things mean a lot to me."

Gastineau claims he is [illegible] crossing the picket line for money and announced he would donate the first paycheck he gets during the strike, about $45,000, to the Tomorrow's Children Fund, a charity he heads for cancer-stricken children. But money has to be on his mind. Despite his contract, Gastineau has financial problems, according to his ex-wife. She told a TV interviewer that he was behind in his alimony payments.

Money is a far bigger issue for many of the strikers. The NFL's journeymen, whose minimum pay ranges from $50,000 a year for a rookie to $70,000 for a third-year man, face the same perils any striker does. There are mortgage and car payments to make and mouths to feed at home. And there is an additional problem. Most players are paid on a game-by-game basis, meaning that their personal fiscal year is only 16 weeks long. A player earning $60,000 a year loses almost $4,000 for each game he sits out. Even Tony Dorsett, star running back of the Dallas Cowboys, felt the pressure. He returned to work reluctantly, after nine days, saying he feared he would lose half of his $6 million annuity.

Ironically, Gastineau has probably done more to raise salaries for the Jets than has the union. His big contract, negotiated when the United States Football League was terrorizing NFL owners with player raids, set a benchmark for linemen everywhere. "My contract was first, and everyone else's followed," he says. Although other players knocked his style or ability, he says, "They all wanted Gastineau money."

Most players don't get anywhere near it. Although the NFL pays its players an average of $215,000 (see table), 30% of all play-

REPORTER ASSOCIATE *Edward Prewitt*

WHO GETS WHAT IN PRO SPORTS

NFL, 1987

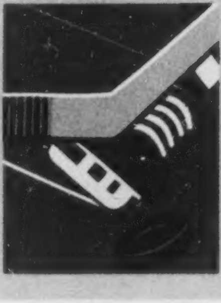
- Average salary: $215,000
- Minimum salary: $50,000
- Top salary: $1,500,000 (John Elway, Denver Broncos)
- Average career: 4.2 years
- Severance: $[illegible]
- Annual pension at age 55: $9,000

NBA, 1986-87

- Average salary: $445,000
- Minimum salary: $75,000
- Top salary: $2,500,000 (Magic Johnson, Los Angeles Lakers)
- Average career: 4 years
- Severance: $15,000
- Annual pension at age 55: $11,500

BIG LEAGUES, 1987

- Average salary: $410,000
- Minimum salary: $62,500
- Top salary: $2,400,000 (Jim Rice, Boston Red Sox)
- Average career: 6 years
- Annual pension at age 55: $25,128



NHL, 1986-87

- Average salary: $170,000
- Minimum salary: $25,000
- Top salary: $760,000 (Wayne Gretsky, Edmonton Oilers)
- Average career: 4.5 years
- Windfall after 400 games: $250,000
- Pension: $4,000 invested each season played, drawn beginning at age 55

Severance and pension figures are for a player who has completed five seasons.

JOHN PIRMAN

LOUIS DELUCA—DALLAS TIMES HERALD

Confronting scabs *is a vital function in holding the union's ticket line. That's defensive tackle Kevin Brooks of the Cowboys taunting substitute players as they leave their Dallas training ground.*

ers earn less than $100,000, and 57% earn less than $200,000. The injury rate is 100%. The average career lasts about four years, which means the average player can expect to earn around $850,000 during his time on the field. A middle manager in a FORTUNE 500 company would make that much in 12 to 14 years. But unlike most football players, the middle manager would still have his peak earning years ahead of him.

Even if the union could bring the owners to their knees, the spoils would be distributed disproportionately to the 15% of the players who earn more than $300,000. Free agency, the most salient issue of the walkout (see box), would benefit the best players the most, and many of the nonstars would rather not strike for the right of Miami's Dan Marino, or the next hotshot quarterback, to make an extra million. "I don't think free agency is the big issue," says Calvin Magee, a tight end on the Tampa Bay Buccaneers. "The important issues to me are stuff like the pension plan and severance pay."

Confrontation and intimidation are vital weapons in keeping any strike alive. Oddly, for a profession that thrives on aggression, the football players didn't seem all that interested in picketing. Although strikers pelted scabs with eggs a few times and some fists flew, many teams were not manning the lines day in and day out. "It's damn important to look a scab in the eye and say, 'Do you know what you're doing?' " says Bernie Hostein, who helped coordinate the steelworkers' picketing against USX this year.

The football players' union doesn't have the experience hitting the bricks that the USW does. It has struck or been locked out three times without a victory. Typically when a strike is in the offing, union leaders spread the word to the troops to salt some money away. Often the company, against its will, helps employees out by producing full tilt to build inventories before the walkout. That means the workers bring home checks fattened by overtime.

During the USX stoppage, the union had a strike fund to draw on, arranged for medical insurance, and helped members apply for food stamps. "This may not relate much to a guy losing $50,000 a week," says Hostein, "but it showed the people we were here."

WHAT THE TEAMS PAY (1986 AVG.)

Dallas Cowboys	**$256,612**
New York Jets	**$252,699**
San Francisco 49ers	**$250,133**
New York Giants	**$248,013**
Los Angeles Raiders	**$243,836**
Kansas City Chiefs	**$236,045**
San Diego Chargers	**$221,532**
Seattle Seahawks	**$219,863**
New England Patriots	**$219,860**
Cincinnati Bengals	**$211,867**
Chicago Bears	**$209,462**
Cleveland Browns	**$204,974**
Miami Dolphins	**$204,830**
St. Louis Cardinals	**$202,194**
Los Angeles Rams	**$200,931**
New Orleans Saints	**$195,992**
Atlanta Falcons	**$195,595**
Washington Redskins	**$194,409**
Indianapolis Colts	**$192,729**
Tampa Bay Buccaneers	**$185,112**
Green Bay Packers	**$177,141**
Detroit Lions	**$174,650**
Buffalo Bills	**$172,341**
Pittsburgh Steelers	**$172,020**
Minnesota Vikings	**$164,440**
Philadelphia Eagles	**$163,390**
Houston Oilers	**$162,033**
Denver Broncos	**$140,120**

SOURCE: NATIONAL FOOTBALL LEAGUE PLAYERS ASSOCIATION

Hostein and other labor leaders have taken a keen interest in this walkout. They know that striking football players get a lot more attention than striking steelworkers. The labor leaders regard the walkout as an ideal opportunity to demonstrate union strength. Representatives from the steelworkers, the United Food and Commercial Workers, and other unions have joined the players on the picket lines. The autoworkers planned to air a radio commercial featuring President Owen Bieber that urged fans to support the union. And the steelworkers' president, Lynn Williams, ordered the union's offices open to all players to better coordinate and communicate their activities.

Keeping the stars from crossing the line was of paramount importance to the union. Unlike a factory, where output per employee is relatively equal, "franchise" players like Walter Payton of the Chicago Bears or Lawrence Taylor of the New York Giants have an outsize impact on the game. Several days into the strike, Ronald Seeber of Cornell University's School of Industrial and Labor Relations, analyzed the situation this way: "The success of the strike depends on 40 or 50 people, the big names. If they come over and play, it will be over."

THE JETS had been picketing every day, but none of the scabs—desperate for a shot at the NFL—seemed too scared. Each day a bus filled with 40-odd newcomers ran a gauntlet of taunting regulars as it entered the Jets' Hempstead, New York, training camp. The bus was guarded by cop cars in a vehicular version of the old flying wedge that afforded the occupants more protection than Jets quarterback Ken O'Brien could ever hope for.

Gastineau tried to avoid his striking teammates, but he scuffled with one Jet who spit at him. The others rode him hard in the press. For them, as for most strikers, the choice was straightforward: You are either for the union or agin' it. And they were for it.

Early in the strike Gastineau expressed hope that his teammates would respect his feelings and "let bygones be bygones." By the fourth day he knew better. "It's too bad you have to play defense on the field and off," he says. But maybe that's the way it has to be when your work consists of 22 men imitating a train wreck.

HOW THE RICHEST COLLEGES HANDLE THEIR BILLIONS

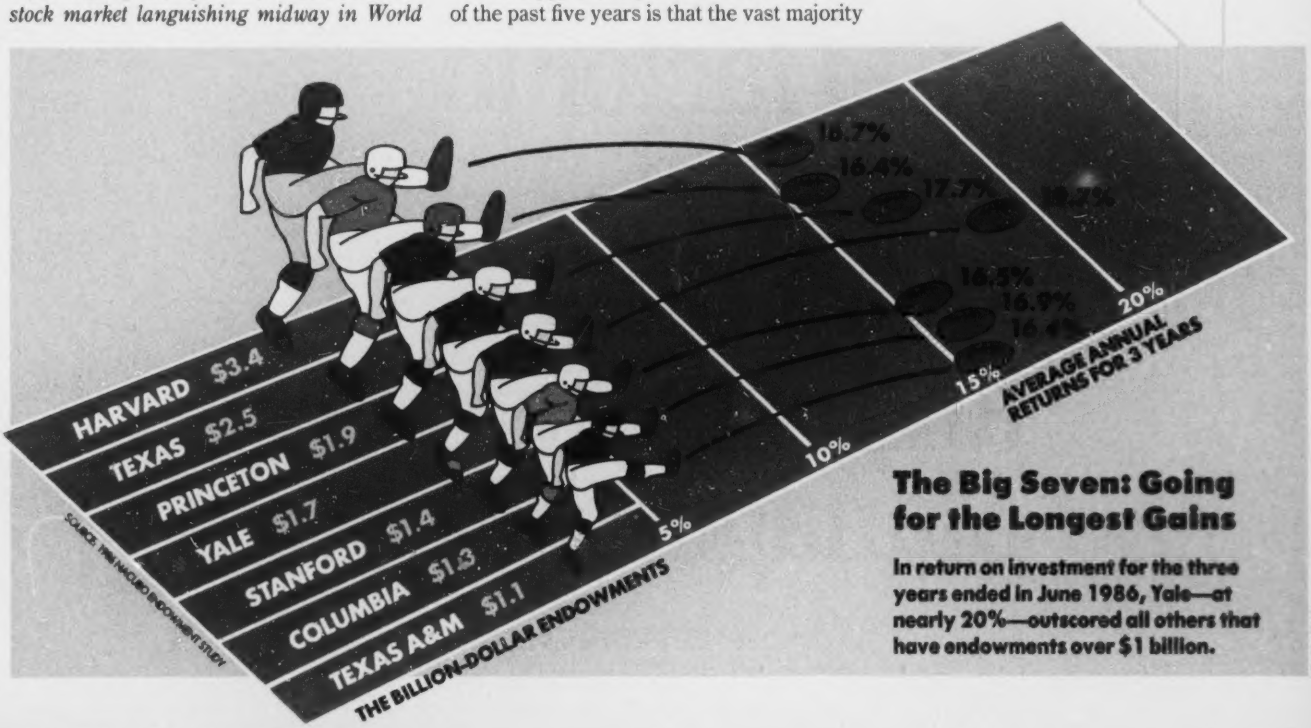
Some of the brightest investment pros in the U.S. work with them. Here's a look at how well they perform and what lessons more modest investors can learn.

■ *by Christopher Knowlton*

ONCE UPON A TIME, late in the dizzy bull-market party of the Roaring Twenties, the chairman of Princeton University's investment committee, a banker named Dean Mathey, decided that the level of stock market prices was unsustainable. He quietly moved the university's endowment out of stocks and into bonds. For one full year his decision proved dead wrong. The market waltzed to new highs. Then the Crash hit, and the Depression. Mathey's switch to bonds, a shrewd deflation hedge, was vindicated.

Fourteen years after the Crash, with the stock market languishing midway in World War II, Mathey acted again, selling 80% of the university's bonds and replacing them with common stocks. The chairman of the trustees' finance committee denounced Mathey as reckless and irresponsible, pointing out that the great lesson of the Depression was that bonds were the only prudent and conservative investment for a college endowment fund. Forced to defend what would again prove to be an exquisitely timed maneuver, Mathey wrote in reply: "The only true test of conservatism is to be right in the future."

One happy consequence of the bull market of the past five years is that the vast majority of colleges and universities have been "right in the future." Heavily invested in equities, endowments achieved a median return of 16.6% a year for the five years through June 1986, the most recent year that the National Association of College and University Business Officers (Nacubo) has data for. That fell short of the 19.1% annual rate for Standard & Poor's 500-stock index over the same period, but it came respectably close to the



SOURCE: 1986 NACUBO ENDOWMENT STUDY

The Big Seven: Going for the Longest Gains

In return on investment for the three years ended in June 1986, Yale—at nearly 20%—outscored all others that have endowments over $1 billion.

HAYES COHEN

17.9% median return for institutional investors and professional investment advisers reported by SEI Corp. of Wayne, Pennsylvania. The leader among a 25-college group tracked by Cambridge Associates, an educational consulting firm: Amherst, with a 23% return on average for the past five years.

At the end of fiscal 1986 seven universities could point to endowments totaling over $1 billion. The list was headed by that granddaddy of the Ivies, Harvard, with $3.4 billion. Following, in order, were the University of Texas system, Princeton, Yale, Stanford, Columbia, and the Texas A&M system. By now Harvard has passed the $4-billion mark, and several other well-known colleges have probably joined the billionaires list. Not bad for pools of capital that had their modest origins in land grants or, as in Yale's case, a box of books, a portrait of George I, and a 1718 shipment of goods from the East Indies.

Unhappily for these otherwise fortunate few institutions, faculty, administrators, and parents alike have already put the squeeze on their seemingly lavish financial resources. Besieged by rising costs for salaries and research, loss of federal support, exorbitant tuitions, and a continual need for expensive capital improvements, universities must scramble for ever better returns. While the top schools informally compete to achieve the best performance, the true race is against time and inflation.

IN THIS ARTICLE FORTUNE reports how some of the country's brightest investment professionals go about managing money for some of the country's best colleges, how well they have succeeded, and what lessons they have learned. Both individual investors and trustees of other endowed institutions can profit from their experience, and from examining how they balance the pressing need for income today against the responsibility to husband precious capital for the future. FORTUNE deciphered performance data, reported here for the first time, from coded information in last year's Nacubo endowment study.

Historically, the universities with the most money have led the way in developing methods of portfolio management, in many cases getting into new investment vehicles before other money managers did. Stanford made its first venture capital investments 20 years ago and became a pioneer in high tech. In the late 1970s Harvard took up security lending—loaning securities to brokers who need to cover short sales—and a riskless form of arbitrage. Yale discovered foreign equities early and, 13 years ago, got into LBOs. Says Rodney H. Adams, treasurer of Stanford and dean of the field: "University endowments, as an investing entity, are at the cutting edge of how one might manage one's money."

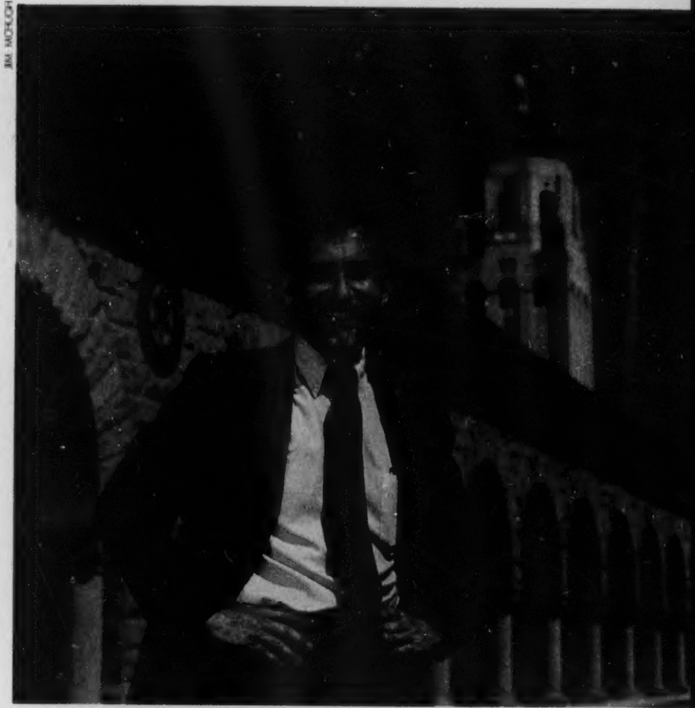
Even so, there have been more than a few semesters when endowments flunked the course. In the 25 years following Princeton's prescient move back into equities, colleges shook off the memory of the Depression and graduated to a strategy that balanced their money cautiously between stocks and bonds. That approach persisted until 1966, when McGeorge Bundy, from his pulpit as president of the Ford Foundation, began to urge a more aggressive investment method for college endowments that focused on total return, defined as the change in market value plus dividends and interest. His recommendations—that endowments take on a heavier equity weighting, emphasize growth stocks over blue chips, and spend principal, if necessary—proved ill-timed. No sooner had colleges loaded up on stocks than the Dow Jones industrial average crashed from 985 in 1968 to 631 in 1970.

Endowment administrators would prefer to forget some other trying times: 1973 and 1974, when stocks dropped again, and the late 1970s and early 1980s, when few endowments kept pace with double-digit inflation and many had to dip deep into principal. Despite these setbacks, the equity-biased total return orientation won out. Norman N. Mintz, a former economics professor who is executive vice president for academic affairs at Columbia, states the prevailing wisdom: "The historical data suggest that equities outperform fixed-income securities over the long term, but equities do that only because there are those moments when equities go through the roof. You may have to sit for long periods of time waiting for that to happen."

Such a Rip van Winkle approach is entirely appropriate for endowments, which have the longest time-horizon of all pools of capital. Unlike pension funds, which have claimants who ultimately must be paid their benefits, endowment funds have no end point at which they must pay out principal. Says Mintz: "The endowment of an institution like this should grow continuously and forever."

To carry out their responsibility for overseeing the endowment, the trustees of a college have two key decisions to make: how to allocate the assets among the available investments and what portion of the total return to spend. The first decision hinges on the types of return desired and the trustees' comfort with risk. The trick with the second is to balance the institution's near-term and long-term needs.

Ideally the trustees aim to earn at least 11% a year long term, paying out 6% to help fund operations and reinvesting the remaining 5% to ensure that the endowment grows faster than inflation. Income from the endowment usually covers anywhere from 5% to 20% of a university's operating expenses. Naturally, everyone wants more. "Colleges just eat up money," says Theodore L. Cross,



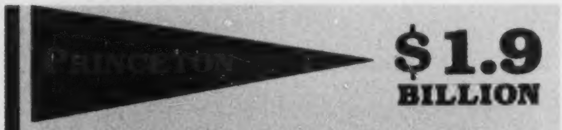
JIM MCHUGH

STANFORD **$1.4 BILLION**

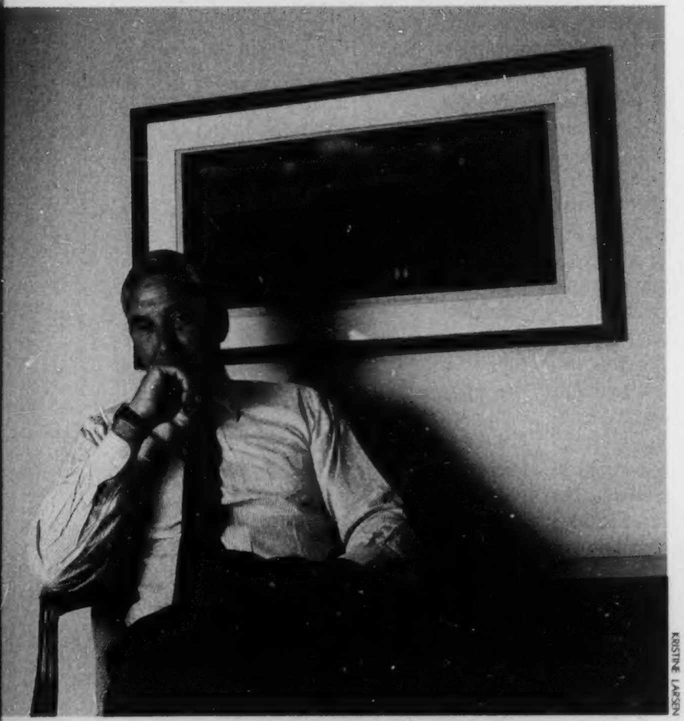
The Strategist: Team-spirited Treasurer Rodney Adams, 49, beat the crowd into investments ranging from high-tech venture capital to foreign bonds.

a New York publisher, editor, and money manager who chairs the investment committee at Amherst. Some 80% of a college's costs are labor related (primarily faculty salaries), and colleges are handcuffed when it comes to improving productivity. Fire faculty and you lower the student-to-faculty ratio, a closely watched measure of the quality of education. Nor can you cut faculty salaries, already embarrassingly low. As Mintz of Columbia ruefully observes, "We are trying to attract the best minds in the country, and we are paying them peanuts."

For trustees, investing assets often means walking the social responsibility tightrope. Should the college own stocks of companies with operations in South Africa? Some 20% of the S&P 500 companies do some form of business in South Africa, and trustees worry that excluding those stocks from a portfolio will hurt returns. Campus protests are losing some of their punch as more and more colleges divest and a rising number of U.S. companies leave South Africa.



The Value Investor: Trustee John Beck, 55, chairman of the investment board, bets heavily on equities and spreads his funds among 11 outside money managers.


KRISTINE LARSEN

Once the trustees have set endowment policy, the job of carrying it out falls to the investment manager or the treasurer. He either runs the endowment through an internal staff or distributes it among a group of external managers—banks or, more commonly, private money managers. University investment managers form a loose clique in the endowment world, and frequently share investment opportunities. For example, last spring Yale, Duke, Wellesley, and the University of North Carolina teamed up with Harvard in a gas-drilling partnership in the Gulf of Mexico. (The first two drilling attempts came up dry.)

A favorite device for collaborative efforts is the Common Fund in Fairfield, Connecticut, formed in 1971 with a Ford Foundation grant. The fund gives colleges and schools of all sizes the chance to invest collectively with top money managers they otherwise could not afford, such as Fidelity Management and Capital Guardian Trust. The $2.5-billion fund's results are remarkable. For the ten years ended last June, Common Fund stocks grew an average of 20% a year (vs. 17.1% for the S&P 500) and bonds 10.7% (vs. 10.1% for the Salomon high-grade bond index).

Few institutions can point to better returns. Amherst, with a $314-million endowment supervised by trustee Cross, has achieved its remarkable results largely because of its principal money manager, Grantham Mayo Van Otterloo of Boston. The firm takes a traditional value-oriented approach, hunting for stocks with low ratios of price to earnings and price to book value. Some of the billionaires also deserve honorary degrees in finance. Over the ten years ended in June 1986, Princeton led the seven with a 16.5% average annual gross total return (S&P 500: 14.5%). Yale, second at 14.8% for the decade, nonetheless outperformed Princeton over the past three years, 19.7% to 17.7%. No. 3 for the ten-year period is Stanford, with 14%.

With a ten-year return of 13.7%, Columbia nosed out Harvard for fourth place. Until 1985 Columbia had half its money tied up in the land under Rockefeller Center. The university sold the property to the Rockefeller Group for $400 million, the highest price ever paid for a piece of land. Harvard, despite its reputation for nearly mythical investment prowess, has performed right around the average of the 88 universities that have investment pools of $100 million or more: 13.2% for the ten-year period.

By state law, the endowments of the University of Texas and Texas A&M are lumped together in a single fund, and both depend heavily on the state's oil and gas resources. They have been hurt badly by the slump in energy prices. Nonetheless, their combined endowment returned an average of 16.4% annually over the past three years; comparable ten-year returns are not available. Another sad story in the endowment world is New York University, the largest U.S. private university, with 45,975 students. The trustees, led by CBS chief Laurence Tisch, put the endowment into domestic bonds in 1981 and sat out the greatest stock market rally of the century (see box).

EACH OF THE BILLIONAIRE universities takes a different approach to running its money. A few, like Harvard, keep all or a portion of the endowment fund in their own custody; others, like Princeton, farm it all out. Money manager John C. Beck of the New York firm of Beck Mack & Oliver chairs Princeton's investment board. A big, rough-hewn man, he has an MBA from Harvard and a passion for racket sports. Although he describes himself as a value investor, Beck looks for outside managers who represent a variety of strategies. "Theories don't make money," he says. "People make money." Princeton credits its success to astute selection of outside money managers—11 of them—and an aggressive policy of putting around 80% of the endowment in equities.

Not all the equity investments have been simple stock picks. In 1961 the Princeton endowment lent Ray Kroc $1 million to buy his first hamburger stands from the McDonald brothers. The loan included an equity "kicker" based on gross receipts. For ten years, every time McDonald's sold a hamburger Princeton got a fraction of a penny. The kicker delivered a field goal, adding $5.4 million to the endowment.

Yale's aggressive equity orientation matches Princeton's, but in New Haven the

KRISTINE LARSEN

YALE **$1.7 BILLION**

The Economist: Chief investment officer David Swensen, 33, a Ph.D. and a Shearson alumnus, uses theoretical models to help allocate assets.

investment staff manages the bonds in-house—and with considerable success. Last year Yale's bond portfolio returned 5%, beating the Shearson Lehman government-grade bond index by nearly a percentage point. Investment manager David F. Swensen, who has a Ph.D. in economics, favors a quantitative approach: To help make asset allocation decisions, he uses a capital asset pricing model, a sophisticated formula that shows him how juggling the percentages allocated to five different kinds of investments affects expected long-term risk and return.

Stanford relies on outside money managers to run the endowment day to day, but it handles in-house about $600 million in non-endowment operating funds that are invested primarily in short-term instruments. Rod Adams, treasurer and chief investment officer, has a 25-member staff, a number of them self-taught. They include traders, real estate professionals, and one administrator and assistant devoted to managing the university's $50 million of oil, gas, and gold and silver mineral rights in 19 states.

Says Adams: "We probably do more strategic planning, long-range forecasting, and capital facility budgeting than any other institution of higher education in the world." He has made some smart diversifying moves—for example into foreign bonds in January 1985, about a month before the dollar peaked against foreign currencies. Foreign interest rates and the dollar both fell, pushing up bond prices and handing back a total return to date of 120%—staggering for bonds.

Unlike the other billionaires, Harvard runs over 85% of its endowment internally, and finds it cheaper that way. The university spends 0.2% a year on management, vs. a median of twice that for its peers. The president of the Harvard Management Co., the subsidiary of the Harvard Corporation that runs the endowment, is Walter M. Cabot, a scion of the old Boston merchant family. Cabot, a Harvard B.A. and MBA, is a blunt, saturnine man who drawls his a's in the Kennedy fashion and twists a strand of graying hair around his finger as he talks.

He presides over a staff of 115 that occupies three floors at 70 Federal Street in Boston's financial district. The Harvard Management Co., one of the most sophisticated in the business, engages in everything from processing and monitoring gifts to arbitrage and direct placement investments of venture capital. Cabot takes an entrepreneurial approach. "If you've got to find ten different ways to skin a cat, you do it," he says. "Because if you don't, you are going to be left behind."

Yet Harvard's endowment growth has not kept up with its Ivy League rivals'. The disparity results partly from an equity allocation less aggressive than Princeton's or Yale's, and partly perhaps from the endowment's cumbersome size. To compound Harvard's problems, the equity side of the portfolio was whipsawed in the early 1980s and then further hurt by the collapse of oil stocks.

Columbia may have better luck at investing than it does at football, but last year was a year of rebuilding in both fields. Norman Mintz took over the investment team a year after the Rockefeller Center deal, when the university found itself with $400 million to invest and nowhere to put it. He hired Cambridge Associates to help him pick outside money managers. He has divided a $300-million equity core between a value-style manager and one who takes a quantitative approach, using computer programs to help make investment decisions. Another $100 million is in S&P futures, indexed to track the S&P 500. Columbia also puts money into Kohlberg Kravis Roberts leveraged buyouts, most recently Beatrice. Small wonder: Until September Jerome Kohlberg Jr., LL.B. '50, a former partner in KKR, headed the investment committee.

Michael E. Patrick, executive vice chancellor for asset management at the Austin campus of the University of Texas system, oversees the combined UT-Texas A&M Permanent University Fund. Its chief asset is 2.1 million acres of West Texas land that provides oil, gas, and water royalties, grazing fees, and so-called surface income from vineyards and leases for pipelines, power lines, and hunting. Last year the fund's receipts amounted to a record $289 million, surpassing the $263-million high in 1981 when oil prices hit their peak. Forbidden by law to invest fund income in real estate, UT sticks to domestic stocks and bonds. Patrick, too, has distributed a growing portion of the endowment to outside money managers.

COLLEGES LOOK TO outside managers for expertise—say in foreign equities—that they can't develop in-house, and for diversification. The universities with the best investment records have been those that avoid subscribing to a single theory of investing—for example, growth or value—and instead seek out experience and good judgment wherever they can find it. Much of the move toward diversification reflects the difficulty of trying to pick the market's major turning points. Says Mintz of Columbia: "I know of very few great market timers. You always hear about the guy who got out in September of 1929, but there weren't a lot of them."

Diversity not only improves protection against market fluctuations, but also in many cases provides a shot at higher returns. Harvard's arbitrage group, which can make millions on a single transaction, looks for annual returns of 15% to 30%. Yale's leveraged buyout investments averaged an eye-popping 46.3% a year over the past 13 years. Its venture capital operations returned 33.2% annually from 1977 through 1986.

George F. Keane, president of the Common Fund, strongly advocates diversification into real estate for its better-than-bond returns and as an inflation hedge. He hopes to put together $1 billion over the next two years to launch a Common Fund REIT. Some universities already get gorgeous returns from real estate. Yale bought half the Corning Glass building on Manhattan's Fifth Avenue in 1978 for $15 million; today the investment is valued at over $100 million. Stanford spent $6 million to build a shopping center on the edge of its campus in 1953, and has sunk $30 million more into it. The center wins design awards, brings in sales of $300 per square foot, and returns Stanford 22.3% a year on its investment. It has a book value, minus the land, of $74 million. Seven years ago Harvard leaped at the chance to buy two Washington, D.C., office buildings for $35 million; they have quadrupled in value.

Real estate is only one way to diversify. By tinkering with its state-of-the-art asset allocation model, Yale will be shifting more into foreign equities and venture capital as well. Among its many special-situation investments, Stanford is backing Steve Jobs in Next Inc., the Apple founder's attempt to develop a computer workstation for the higher education market. Princeton capitalized on the insurance background of one trustee to help launch a small reinsurance company called Tiger Partners.

A few universities have tried to circumvent the markets in favor of unorthodox investments. Wesleyan acquired American Education Publications—best known for *My Weekly Reader*—for $8 million in 1949; it held on to the cash cow for 16 years before selling it to Xerox for $64 million in stock. Grinnell, a small college in Iowa, snagged legendary investor Warren E. Buffett as a trustee. In 1976, at Buffett's suggestion, the trustees bought a Dayton TV station for $12.9 million. Three years later they sold it for $50 million.

HARVARD **$3.4 BILLION**

The Entrepreneur: Walter Cabot, 53, president of Harvard Management Co., and a staff of 115 run more than 85% of the largest college endowment in-house.

KRISTINE LARSEN

Financier Theodore Cross hoped to duplicate Buffett's feat when he recommended that Amherst buy two TV stations for its endowment three years ago. The trustees balked, concluding that station ownership was too risky and might be construed by the faculty as a less than benign activity. "If we had made those deals the endowment would be double what it is today," says Cross. "My theory is that it is going to be increasingly difficult to make the endowment grow in conventional ways. So I would support an effort to be bolder, to make an acquisition if it can be sold to the faculty and trustees."

Cross will not be alone exploring special-situation investments and acquisitions. Among the billionaires, Princeton has hush-hush plans to buy depressed Iowa farmland. Harvard has high hopes for its new offshore drilling partnership and a once-troubled oil service company that Cabot and his staff have helped to resuscitate.

The challenge, of course, will be to manage the risks in these speculative ventures. Says Cabot of Harvard's $4-billion endowment: "We can't take this thing to the race track." But he feels that even under "an overall conservative umbrella" he will find attractive investment opportunities. Endowment managers as a class work under conservative umbrellas. A few of those interviewed for this article have used options as part of a hedging strategy, but never to speculate. And junk bonds, while not unheard of in endowment portfolios, remain a rarity.

WHAT IS THE BEST investment strategy for building a billion-dollar endowment? John Beck of Princeton favors the individualistic approach. Says he: "The secret is for institutions to have the guts, courage, wisdom, and luck to find a Dean Mathey or a Ted Cross, then to have people on the investment committee who are wise enough to understand these men and to judge them—and to cut them off at the knees and roll them into the closet if they mess up."

George Keane of the Common Fund sees it differently. "The success of endowment investing," he says, "depends very substantially on having a good investment committee on the board of trustees. Nevertheless, I feel trustees need to rely predominantly on professional investment management and not try to invest the money themselves." With Harvard's method in mind, he adds, "We wouldn't think of having a single manager for a billion dollars." When hiring outside managers, Ted Cross recalls, "Our requirements were that the people we picked should be sharp, bright, fiercely competitive, with what is called a strong need for achievement." Rod Adams prefers small money management firms where the partners have a stake in the business.

Trustees face the same plight as the boy in the D. H. Lawrence story "The Rocking Horse Winner," who hears his house whisper, "There must be more money! Oh-h-h; there must be more money." If investment committees can ignore the whispers from faculty and administrators and keep their focus long term, the odds improve that their irreplaceable endowments will win the race against inflation and survive into perpetuity. Joseph Rosenfield, a Grinnell trustee, cites a favorite example of a long-term investment that paid off. Twenty-two years ago, on reading that Warren Buffett was about to buy a run-down textile company called Berkshire

Hathaway, Rosenfield bought 300 shares at $15 for the Grinnell endowment. "I saw recently that Berkshire Hathaway shares are selling for around $4,000," says Rosenfield. "If they get to $5,000 a share I might let the college sell one share—but only to cover that initial investment. Then we would own the 299 other shares for free."

Autumn has wrapped itself like a scarf around the campuses. At Yale, Swensen's investment staff quits early one afternoon to challenge the economics department to a game of softball. On the opposite coast Rod Adams at Stanford throws an impromptu ice cream sundae party to celebrate a birthday. The compensation may not compare, but the quality of life for these campus investment staffs is decidedly better than they would find on Wall Street—which is not to suggest that they approach their work any less seriously. On the contrary, many speak of feeling like principals, as though the money they manage were actually their own. And they sport a bright streak of idealism. Says Ted Cross: "Managing a fund of money for a nonprofit purpose is different from making money for your own account or for your children's account. To make money to fund education—why, that is terribly exciting. After all, what could be more important?" ▣

TSK, TSK, LARRY TISCH

■ Few institutions offer a more dramatic lesson in how *not* to run an endowment than New York University. Its star-studded board of trustees is led by CBS Chief Executive Laurence Tisch, an outspoken stock market bear. In late 1981 the trustees decided to take a stab at calling the next sharp turn in the markets by shifting the endowment from a mixture of stocks and bonds almost entirely into domestic bonds. Theirs is the only university in the country with an endowment of over $3 million that owns no stocks whatever. For the past six years the NYU trustees have watched the bull market of a lifetime from the sidelines.

Says a trustee of a rival college: "Tisch is supposed to be a world-class investor, but he screwed up. The last few years have been dreadfully, terribly costly." FORTUNE estimates that had the NYU trustees applied a total return strategy favoring stocks over bonds by 60% to 40%, they could have added another $200 million to the $500-million endowment since 1977, when they first adopted a bond-heavy approach. And that's assuming no better results than the average endowed college earned emphasizing total return.

Larry Tisch loves bonds. Soon after he joined the CBS board in late 1985, with the Dow at 1500, he persuaded the retirement plans committee to sell the $285-million indexed-equity portion of the pension fund and buy government bonds. At both the New York Public Library and the Metropolitan Museum of Art, where he sits on the investment committees, he urged similar stock sell-offs, with mixed success. The library's $164-million endowment is now 60% in bonds and cash. The museum board, with $350 million, began to follow his advice and sell off equities about two years ago, then thought better of it and increased the equity weighting.

The bond boo-boo at NYU began in 1976, when the university sold the C.F. Mueller macaroni company in Jersey City, New Jersey, which it had owned since the 1940s. The trustees put two-thirds of the $115-million proceeds into fixed-income investments—just in time for a bear market in bonds. By the early 1980s NYU had slipped almost completely out of stocks and deeper into government bonds.

JOE McNALLY—WHEELER PICTURES

New York University's board chairman

The next few years were very good for bonds, and in fact they outperformed the New York Stock Exchange as a whole in 1982 and 1984. Nevertheless, for the ten years ended in June 1986, NYU's return averaged 10.9%, nearly three percentage points below par for the 88 universities with endowments of $100 million or more. Last year NYU's performance ranked 254th among 272 college endowments in a study that the National Association of College and University Business Officers does annually.

"NYU is a paradox," says George Keane of the Common Fund, a highly successful $2.5-billion investment pool for schools and colleges. "They have so much talent on their board and on the investment committee, but they have not been able to do well. One of the problems is that the trustees all get in there and mess around with the endowment." Besides Tisch, the trustees include Lewis T. Preston, chairman of Morgan Guaranty Trust; Walter V. Shipley, chairman of Chemical New York; and Alan C. "Ace" Greenberg, chairman of Bear Stearns.

The trustees invited Greenberg to join the board in October 1983, in part to bring his equity orientation and expertise to discussions of the endowment. But according to George H. Heyman Jr., chairman of the NYU investment committee and an advisory director at Shearson Lehman Brothers, "No one stood up and said we should be in equities." Tisch and Heyman explain that they relied on bonds, primarily Treasuries and Ginnie Maes, because of the need for high yield and the board's aversion to risk. But most universities need high yields, and yet they heed endowment experts who consider such an income strategy shortsighted. The trustees paid a mammoth price for safety.

"I'm a contrarian," says Tisch. Asked if his contrary view hadn't proved costly to the institution, he shrugs, "It may have been." Nevertheless, he says the trustees have no plans to change their tactics: "I am 100% content to be in bonds and short-term instruments."

Deep convictions like Tisch's are as likely to help as to hurt. Thirteen years ago a single trustee at an Ivy League university averted a total stock sell-off by threatening to resign. The board reversed a nearly unanimous decision, and not a share was sold. The stock market rose smartly, adding $250 million to the value of the endowment in two years.

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SPECIAL ISSUE

THE 1988 INVESTOR'S GUIDE

FEATURING THE FORTUNE INVESTMENT CHALLENGE

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"I should probably diversify more, but I believe in my company."
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"Texaco is as solvent as anything for the senior bondholders, even if Pennzoil gets its $10 billion."
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His picks were so prescient that all he did for most of the year was sit and smile.
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SPECIAL ISSUE DESIGNED BY JOAN HOFFMAN; CHARTS AND GRAPHICS BY RENEE KLEIN

Guiding the Guide: front, editor Johnson flanked by William Bowen and Edmund Faltermayer; rear, Terence Paré, John Curran

ANDY FREEBERG (6)

WELCOME to FORTUNE's third annual Investor's Guide. It's a special issue full of immediately useful advice about where to put your money now—and what strategies appear most sensible for the longer term. Much has been written on these subjects, of course, but we believe that FORTUNE brings to them a depth of experience that you will find unique—and valuable.

The Guide has been created by 30 members of FORTUNE's staff, ranging from the market watchers who regularly produce our biweekly Personal Investing section to the economists who develop the FORTUNE Forecast. Editor Keith Johnson has been supervising the project for three months. In fact, he has been in charge of all three of our annual guides and found this one the toughest challenge yet. It's not easy to discover investments that seem safe yet attractive after the stock market's sharp rise of the past two years. But, says Johnson, "I was pleasantly surprised at how many opportunities are still out there despite the run-up in stock prices."

Johnson was assisted by Edmund Faltermayer, who edits Personal Investing, and William Bowen, a longtime assistant managing editor who came out of retirement to wield his graceful pencil. Our lead investment writer, John Curran, produced three of the stories in the Guide, including those on wise strategies for investing in stocks, bonds, and real estate over the next year. "We go beyond the basics, the nuts and bolts," he says. "We want investors to understand the engines that drive today's sophisticated investment vehicles." Reporter Andrew Serwer examined the usefulness of studying return on equity, a measure of basic profitability that he says should be the starting point for picking an investment. And reporter Joshua Mendes interviewed stock analysts in six countries to uncover some promising stocks overseas. (This is the first of the Guides to be distributed in Europe and in Asia.)

For the essential background that every investor needs, our chief economist, Todd May, using FORTUNE's own computerized model, forecasts the direction of the U.S. economy from now through the end of 1988. Writer Robert Norton tells investors of the opportunities and pitfalls presented by the new tax law. And for the second year running, reporter Terence Paré handled the computer program that tracks the FORTUNE Investment Challenge, in which six top money managers compete to create your best investment portfolio. The competition for 1987 produced a surprise: Two professionals with entirely different strategies virtually tied for first place. Their investment choices—and impressive gains—are revealed on page 176.

Reporters Leslie Brody and Kelly Tasker wrangled with the intricacies of such exotica as real estate investment trusts and computer networking stocks. Joan Hoffman designed the issue, aided by associate art director Renee Klein, who created many of the stylish illustrations, and assistant picture editor Eric Godwin. Godwin displayed ingenuity and doggedness in projects that included photographing the financial advisers to such well-rewarded celebrities as Madonna and Joan Collins.

Renee Klein, Joan Hoffman, Eric Godwin

Chief economist Todd May, Robert Norton, Andrew Serwer, and Joshua Mendes

Marshall Loeb
MANAGING EDITOR

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THE BEST FUNDS OVER THE PAST FIVE YEARS

The surest bets are the ones that score near the top year in and year out.

■ *by Terence Paré*

THE FIRST THING, and often the only thing, many investors look at when selecting a mutual fund is total return—dividends plus capital gains—over the past year or five years. But total return is just the first of several criteria investors should take into account. The level of risk and consistency of returns are as important as a high rate of return over any single period. After all, most people do not buy mutual funds for excitement.

To find funds that provided a solid return year after year, FORTUNE called upon CDA Investment Technologies, an investment research firm in Silver Spring, Maryland. The 15 funds in the larger table below are the ones that did well most consistently among all stock funds over the past five years. They are ranked not by the highest *rate* of return over the five years, but by a statistical measure of which did best year in and year out. For the record, we also list the five funds that shined brightest—all of them gold—over the past 12 months.

A consistent rate of return is particularly desirable in today's heady market, for peace of mind if nothing else. Consistency also is important because it affects an investor's ability to pull out of a fund in good shape even in down years. It's all well and good to comfort yourself in lean times with the reflection that a 30% loss may transmute to a 90% gain when the market recovers. But that comfort will turn cold if you need the money for an emergency.

A portfolio manager who piloted his fund to happy returns over each of the past five years has navigated treacherous waters. Norman Fosbach, president of the Institute for Econometric Research, observes that since 1982 the market has gone from being powered mainly by secondary issues like technology stocks to being driven by blue chips. If a fund manager spots such shifts and reacts shrewdly to them, it augurs well.

More than half the funds in the table did better than Standard & Poor's 500-stock index for the 12 months ended September 30, when it boomed up 43.4%. Six outperformed the S&P's 27.6% rate of return over five years. And all but one beat the market over the past ten years. The one that did not, Loomis-Sayles Mutual, outperformed the S&P the past three years in a row. With the exception of Fidelity Destiny, all 15 funds posted gains when the market as a whole was off during the most recent significant down period, from December 1980 through July 1982. ■

THE 15 MOST CONSISTENT WINNERS OVER THE PAST FIVE YEARS

NAME	1-YEAR RATE OF RETURN to 9/30/87	5-YEAR AVERAGE RATE OF RETURN	10-YEAR AVERAGE RATE OF RETURN	MOST RECENT DOWN MARKET RATE OF RETURN[2]
Loomis-Sayles Capital[1]	52%	32%	29%	16%
New England Growth	56%	28%	27%	16%
Fidelity Magellan	40%	35%	36%	14%
American Capital	43%	23%	28%	22%
Lehman Capital	48%	28%	27%	5%
New England Retirement	46%	24%	21%	9%
Tudor Fund[1]	42%	26%	25%	5%
American Capital Comstock	45%	22%	23%	14%
Loomis-Sayles Mutual[1]	39%	25%	18%	7%
Enterprise Fund[1]	43%	25%	20%	4%
Putnam Vista Basic Income	41%	24%	22%	4%
Fidelity Destiny	46%	32%	25%	−0.1%
Phoenix Stock Fund	40%	28%	26%	2%
United Vanguard Fund	40%	24%	24%	8%
Washington Mutual Investors	32%	27%	20%	6%

[1] Indicates no load. [2] Covers the period from 11/30/80 to 7/31/82.

THE FIVE HOTTEST FUNDS OVER THE PAST 12 MONTHS

NAME	1-YEAR RATE OF RETURN
Van Eck Gold/Resources	122%
IDS Precious Metals	115%
USAA Gold Fund[1]	109%
Keystone Precious Metals	101%
U. S. New Prospector Fund	97%

The five mutual funds that scored the biggest gains over the past 12 months all were up more than twice as much as the market as a whole. And all five are funds that specialize in precious metals. The prices of gold, silver, and platinum soared over the past year, driven upward by fears of higher inflation and interest rates. But the best and brightest of the mutual funds also are among the youngest of the breed. Among the top five, only Keystone Precious Metals has been around as long as five years. Its annual rate of return over that longer period—a comparatively meager 19%—was well below the S&P 500-stock index.

A NEGLECTED CLUE TO PROFITS

Return on equity is a telling pointer to a company's future performance. It highlights stocks that may lead the pack.

■ *by Andrew Evan Serwer*

THE PHONE RINGS. It's your broker, and has he got a stock for you. "This company is *fantastic*!" he booms. "It has a high alpha factor, a low beta factor, and it makes the best darn radish puller you've ever seen!" Do yourself a favor. Tell him to cut the Greek and answer a simple question. What's the company's return on equity?

Often overlooked by ordinary investors and Wall Street professionals alike, return on equity, or ROE, is the amount that the company earns on its shareholders' equity. It is a measure of how profitable the business is and how expertly management puts shareholders' dollars to work. "It doesn't matter whether you're investing in a company or running one, return on equity is the single best way to measure how a business is doing," says Alan C. "Ace" Greenberg, chief executive of Bear Stearns, a New York City brokerage firm. To calculate ROE, get a copy of the company's annual report and divide net income by shareholders' equity. Often called net worth, shareholders' common-stock equity equals the company's assets minus its liabilities and preferred stock, and it's the same as book value.

Theoretically, companies with consistently high ROEs should outperform the market, and over time they will. But your return as an investor, which consists of stock-price appreciation plus dividends, will not necessarily match the company's return on equity. That's because the price of a company's stock rises and falls with the market's perception of the company's future performance. Also, ROE is based on book value, and even if the stock's total return exactly matched the company's ROE, you would have had to buy your shares at book value for your return as an investor to equal the company's return on equity. You are far more likely to pay a premium over book value for a stock with a high ROE, so your return on *your* equity will probably be lower than the company's return on its.

That doesn't mean you can't catch up. The market will adjust your return by pushing the price of your stock up or down, depending on how sustainable investors perceive the company's superior performance to be. If, for example, enough investors believe that management can maintain or even improve a company's 20% return on equity, the stock should appreciate annually by that amount minus whatever is paid out in dividends.

The tricky part is figuring out how much you should pay to join the party. "Each investor must decide at what point the price for a given return becomes too great," says Steven Einhorn, co-chairman of the investment committee at Goldman Sachs. "Return on equity is a good place to start, but you must look at value also." How can you tell when the stock is too expensive?

There is no magic formula, but the market does drop clues. An important one is the stock's price-earnings ratio. Look in the Value Line and Standard & Poor's stock guides, available at your local library or at your broker's, for the stock's P/E range over the past decade. If the shares are currently trading at some

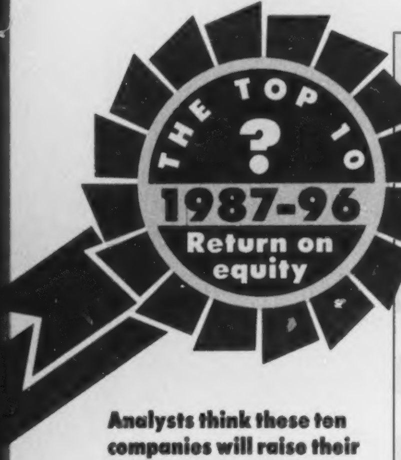
THE TOP 25 1977-86 Return on equity

These 25 companies averaged an ROE of at least 20% over the past ten years. That often gave investors spectacular dividends and capital gains.

	Average annual ROE	Average annual total return
Commerce Clearing House	40.2%	**28.1%**
ServiceMaster	37.1%	**26.4%**
Subaru of America	33.7%	**54.6%**
Tandy	31.3%	**23.3%**
American Home Products	30.7%	**14.8%**
Kellogg	30.3%	**20.3%**
SmithKline Beckman	28.1%	**21.2%**
Dow Jones	26.6%	**24.6%**
Deluxe Check Printers	26.0%	**31.8%**
United States Tobacco	25.3%	**24.1%**
Wal-Mart Stores	25.0%	**48.4%**
EG&G	24.4%	**22.7%**
Dun & Bradstreet	24.2%	**25.6%**
General Cinema	24.1%	**23.6%**
Maytag	23.7%	**17.8%**
Super Valu Stores	23.2%	**26.4%**
Abbott Laboratories	22.6%	**25.2%**
Washington Post	22.5%	**30.5%**
Philip Morris	21.8%	**21.2%**
Coca-Cola	21.7%	**16.9%**
Melville	21.7%	**19.5%**
Merck	21.3%	**17.3%**
Nalco Chemical	20.8%	**9.4%**
Eli Lilly	20.5%	**16.5%**
Bristol-Myers	20.3%	**28.3%**
S&P 500	12.8%	**14.2%**

multiple of earnings that is higher than ever and far above the P/Es for other stocks in the same industry, you could be paying too much. Are investors willing to pay some exorbitant multiple of book value to own the company? If the ratio looks overly inflated by historical standards, most likely the price of the stock fully reflects the company's stellar ROE.

Finding value in a stock with a high ROE often means figuring out if those bountiful returns are sustainable. If you think so and the market doesn't—and you are right—the stock offers value. Here you have to start playing security analyst. Dig through annual reports and read the stock guides for tipoffs. Are sales and earnings growing? Is the company generating a substantial cash flow? Does it have a well-established brand-name product or market leadership to keep those profits coming?



Analysts think these ten companies will raise their ROE and sustain it for the next decade. Most have little long-term debt and are highly profitable.

	Last 3 years average annual ROE	Projected current-year ROE	P/E	Long-term debt to equity ratio
Limited	32.9%	**38.0%**	27.2	**0.10**
Bandag	29.3%	**35.0%**	18.2	**0.21**
Marion Labs	27.3%	**28.0%**	50.8	**no LTD**
Apple Computer	15.7%	**25.5%**	39.7	**no LTD**
PepsiCo	21.1%	**25.3%**	22.4	**1.24**
Squibb	19.8%	**23.3%**	23.5	**0.05**
Safety-Kleen	21.0%	**22.5%**	36.7	**0.14**
McKesson	17.3%	**22.0%**	17.9	**0.54**
Noxell	21.3%	**22.0%**	25.7	**no LTD**
Great Lakes Chemical	15.9%	**21.1%**	26.7	**0.22**

One sign that a company with a high ROE will be able to maintain it can be found in its payout ratio—that is, how much of its earnings it parcels out to investors as dividends. Look for a low ratio, because that means the company is reinvesting profits in its high-return businesses instead of frittering them away on the shareholders. Investors may prefer a fat dividend check, particularly since the demise of the capital gains preference puts dividends on equal tax footing with long-term gains starting in 1988. But a company with a high ROE is reinvesting its earnings at a top dollar rate. Could the shareholders invest those earnings as advantageously themselves?

There are a few tricks that companies can pull to raise their ROE artificially, but you can usually spot them on the balance sheet or the income statement. Look to see if long-term debt is growing as a percent of total capital. By decreasing its equity through a repurchase of shares or by increasing its borrowing through sales of debt securities, a company can often jack up its ROE quickly. Borrowing is not bad, but it does make the company a riskier investment. If earnings tumble, managers may be forced to sell assets to service the debt, which will result in a lower ROE.

Be chary of one-time gains and nonrecurring items that temporarily inflate net income and thus return on equity. Unloading the radish-puller division may produce an extraordinary gain, but only for one year. In 1987 many nonindustrial companies will get a one-time gain in the guise of a lower tax rate that will increase net income. Another point to remember: Cyclical businesses often produce cyclical returns on equity. USG, the largest domestic manufacturer of gypsum, dramatically improved its ROE from 6.2% in 1982 to 38.5% last year. A five-year boom in housing construction drove gypsum prices to record highs, but analysts don't expect those prices to hold up. So they think USG's return on equity may spring a few leaks in the basement.

Assuming you have not overpaid for a firm with a superior ROE, how well can you expect the stock to perform in terms of total return? To answer that question, FORTUNE culled the 500 largest industrial companies and the 500 largest service companies to find those that averaged a return on equity of at least 20%—a standard of excellence Wall Street analysts use—over the ten years ended in 1986. At no time could a company fall below 15%. Only 25 concerns made the cut; with one exception, Nalco Chemical, all were good to top-notch performers in the market. The group averaged an annual return to investors of 24.7% over the decade, shooting ahead of Standard & Poor's 500-stock index by ten percentage points.

The companies on the list have a lot of things in common. They are cost-conscious and believe in sticking to their core businesses. But most critical is their competitive position in their industry. Says Anne Anderson, president of Atlantis Investment Co., an advisory firm in Hoboken, New Jersey: "For a company to maintain an ROE of 20% or better for an extended period, there must be something unique about its business. It might be a brand name, a franchise, a patent. *Something* gives these companies a competitive edge." Good examples are the patented drugs of pharmaceutical companies like Merck, SmithKline Beckman, and Eli Lilly, the near-monopoly newspapers of Dow Jones and Washington Post Co., and the strong brand names of Kellogg, Coca-Cola, and Maytag.

EVEN SO, total return and return on equity don't match because of that varying perception by the market of the companies' ability to maintain high levels of profitability. For instance, Subaru of America, which imports cars to the U.S., returned a fat 54.6% *per year* to investors—after Tyson Foods, the second-best performance of America's 1,000 largest public companies. But Nalco, a producer of specialty chemicals, was the only company of the 25 to lag behind the market, returning a meager average of 9.4% annually.

If you bought Subaru in 1977, you paid only a slight premium over book value, which suggested the market was skeptical about Subaru's future. In 1986, however, Subaru's shares traded for more than six times their book value. You paid at least three times book value for Nalco in 1977, but investors never believed it could sustain its ROE in the unglamorous chemical business. Through the decade its shares hovered near three times book value. Now Subaru's return on equity has been pinched by the high yen and an overly aggressive buyer incentive program. Since last year the

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No matter how high their ROEs, even rock-solid companies can become so overvalued they have nowhere to go but down.

stock has declined from $39 to near $10.

No matter how high their ROEs, even rock-solid companies like American Home Products, Coca-Cola, and Merck can become so overvalued that they have nowhere to go but down. In the early 1970s, during the so-called two-tier market, investors awarded these well-known growth stocks very high price-to-book multiples. But when the market soured in 1974, these stocks took a tremendous beating.

SPOTTING tomorrow's most profitable companies is not easy, but it can be very rewarding. For example, a $20,000 investment in Subaru ten years ago was worth over $1.5 million at the end of last year. The table on page 56 shows a sampling of companies that Wall Street analysts believe will average returns on equity of more than 20% for the next decade. Many of these enterprises have recently improved their ROEs, and all have something unique about their businesses that could well allow them to sustain a high return.

It's no surprise that two drug companies made the list, since patents can confer a potent competitive advantage. Analysts believe **Squibb** and **Marion Labs** will easily maintain ROE. "Squibb's is up because it bought back stock while its profits were rising sharply," says analyst Frederic Greenberg of Goldman Sachs. Squibb took that course because it believed the shares were undervalued and considered them a sound investment. Greenberg adds: "I think the company will become even more profitable over the next several years because its hypertension drug, Capoten, will be a strong seller into the 1990s."

Tom Nourse of Nourse Associates, an investment adviser in San Diego, notes that Marion Labs has a strong cash flow and no long-term debt. Profits rose nearly sevenfold from 1983 to 1987, while the dividend yield dropped from a lean 1.2% to a skimpy 0.5% because the company is reinvesting

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The Limited is "the leader of the specialty retailing business. The company gets more out of its floor space than any of its competitors."

its cash for growth and partly because the shares are more pricey. Unfortunately, at an amazing 16 times book value, Marion is an expensive stock. But if its past is prologue—the shares have gone up over sevenfold in the past 3½ years—the stock may be cheap at the price.

ALTHOUGH COMPANIES with high returns on equity most often crop up in the pharmaceutical and consumer product industries, Byron Wein, the U.S. portfolio strategist for Morgan Stanley, points out that savvy managers can make almost any business profitable. His example: the **Limited**. "It's an outstanding company, the leader of the specialty retailing business," he says. "It gets more out of its floor space than any of its competitors." Earnings have risen by a factor of 13 in the past decade, and the Limited has recently cut its long-term debt by over $300 million.

Wein is also a fan of **McKesson**, the nation's largest distributor of drugs and toiletries. It owns 83.3% of Armor All, an upholstery and tire protector for cars. It sells several brands of bottled water in four Western states, and imports wine and liquor. Adds Wein: "McKesson owns 86.2% of PCS, which is the largest processor of prescription drug claims for group health plans in the nation and accounts for 9% of profits. It has little in the way of fixed costs, so its margins are high."

Both Coke and archrival **PepsiCo** are usually near the top of any profitability derby. Says analyst William Leach, of Donaldson Lufkin & Jenrette: "Look at how Pepsi's three major product groups are performing and you can see how strong the company is." The new Slice soft drink is adding fizz to soda sales, Frito-Lay is recovering from several off years, and the fast-food chains Taco Bell, Pizza Hut, and Kentucky Fried Chicken are really cooking.

Great Lakes Chemical makes specialty

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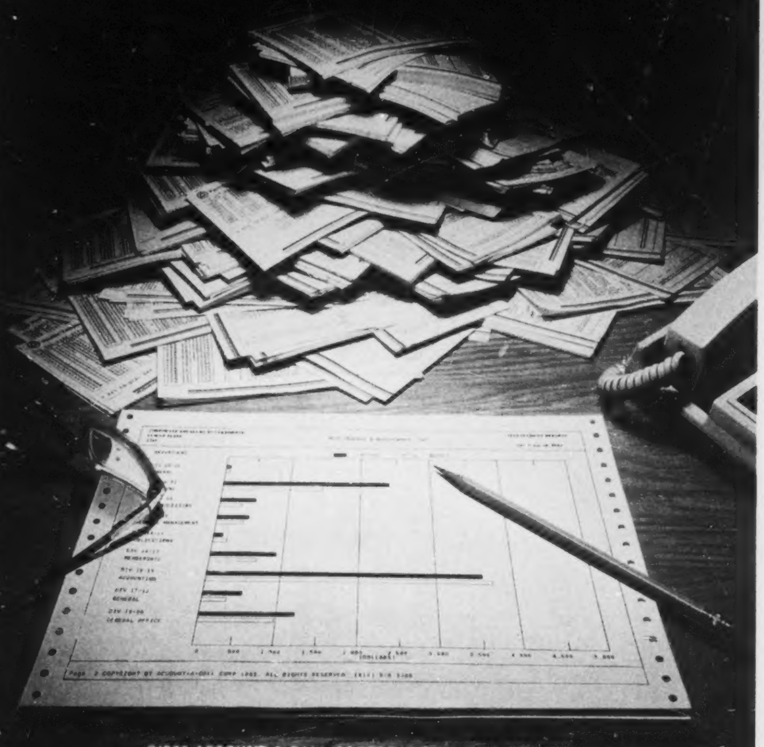

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Companies in waste disposal and cleaning businesses are often highly profitable because the high cost of entry keeps out competitors.

chemicals used in fire retardants and water treatment. James Arenson of Donaldson Lufkin & Jenrette expects strong sales and earnings growth because its products are gaining market share. Return on equity should be back over 20% this year. Great Lakes has averaged a paltry dividend payout of 1.2% over the past ten years, and the company sells for about 3.5 times book value.

Charles Clough, chief portfolio strategist for Merrill Lynch, anticipates golden decades for two highly profitable companies. One is **Bandag**, which sells retreaded tires for trucks. "It dominates its market and should continue to do so," he says. "Bandag has always been very profitable. I think their ROE will hit over 30% again this year." **Apple Computer** is his other favorite. "Apple went through some tough times in 1984 and 1985, but adversity just made the company stronger," Clough says. He thinks the Macintosh computer will continue to be a strong seller.

Noxell averaged an ROE of 19.87% over the past decade without any long-term debt. Its ten-year average annual total return was almost 28%, and analysts feel confident that the cosmetics maker will do it again. Its Noxzema and Cover Girl lines continue to be the leading mass-market sellers. Profitability has improved steadily since 1982, and last year Noxell earned 21% on shareholders' equity.

COMPANIES in waste disposal and cleaning businesses are often highly profitable because of their specialized nature and because the high cost of entry keeps out competitors. Vishnu Swarup of Prudential-Bache likes **Safety-Kleen**, which leases devices with a solvent that cleans machinery parts for factories and service stations. "I think tougher enforcement of environmental laws will make Safety-Kleen's products more in demand," he says. "They dominate their business and they have very little debt." F